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Presidential Address

ON

THE PRESENT POSITION OF AURAL SURGERY.

Delivered at the First Meeting of the Otological Society of the United Kingdom on Feb. 5th, 1900,

BY SIR WILLIAM B. DALBY, M.B. CANTAB., F.R.C.S. ENG.,

CONSULTING AURAL SURGEON, LATE AURAL SURGEON AND LECTURER ON AURAL SURGERY, TO ST. GEORGE'S HOSPITAL.

GENTLEMEN,—I beg to offer you my sincere thanks for having done me the honour to appoint me the first President of the Otological Society of Great Britain, and I venture to predict that this society has a great future before it. Seeing that it comprises amongst its members all the aural surgeons attached to the metropolitan hospitals and very nearly all of the provincial hospitals, as well as those of Scotland and Ireland, it cannot fail to succeed and to exercise a very important influence on the progress of British aural surgery, for it will represent the work of the aural surgeons and will record it.

The objects of the society are as detailed in its rules: 1. The exhibition and demonstration of patients, models, drawings, and specimens (microscopical or otherwise), illustrating the anatomy, physiology, pathology, and therapeutics of the ear. 2. The reading of papers and the discussion of questions in otology previously approved by the Council. 3. The investigation by committees—(*a*) of matters of public importance relating to otology, and (*b*) of new methods of investigation or treatment of the diseases of the ear.

If I were to allow myself to comment on the avowed objects of this society it would be to say that I am much inclined to agree with the general view which I think I have detected amongst the members, and especially the sub-committee which drew up the rules, that the time of the meetings should not be occupied quite so much in the reading of papers as in demonstrations and discussions of questions which deal with treatment. I think this opinion perhaps owes its origin to an idea that papers sometimes tend to be too discursive or to go over ground that has already been explored and thus to repeat what has been said by others and is therefore within the knowledge of the members. We are all aware that the very best work in medicine and surgery has been through the medium of papers at various societies; but there are papers and papers, and I only mention the view which I think is generally shared, as I conceive it is my duty to give expression to the wishes and ideas of members of the society.

The essential difference between this society and one composed of general surgeons is that whatever is brought forward is certain to be of great interest to every individual member who attends our meetings, for the subject is sure to be one upon which every member is working, and it has been felt that to bring before a society composed of physicians and surgeons a paper on a subject essentially one of aural surgery is to obtain for it very little attention and imperfect discussion. It is in this that the great utility of our society will, we hope, consist.

Another point is that when cases are brought forward it is not only rare cases which perhaps few of us have seen before that will be welcome, but more ordinary ones in which if we have not seen the exact counterpart we have seen something so like that the very comparison is sure to throw some new light on the disease, for it is by incessant mental comparison that knowledge slowly but surely becomes more complete. More light, more knowledge, is what we all seek so long as we practise our art.

I think what would be chiefly noticeable to a lay visitor if he were admitted into this assemblage of aural surgeons would be the comparative youth (with a few exceptions) of the members. And the reason is not far to seek. It is only of recent years that the progress of aural surgery has reached such a point as to attract young surgeons of good abilities and prospects to devote their lives to its practice. I am not going to weary you with an account of this progress, for its remarkable history is within the memory of the elder members, but to myself, looking back 25 years when I was beginning to work at our specialty, the contrast is very striking. Three or four London hospitals only had aural surgeons on their staffs; at other hospitals the ear cases were distributed amongst the surgeons or perfunctorily attended to by an assistant surgeon. Comparatively few patients attended, for the public had not learned to apply for aural surgery except at one well-known institution. The bulk of patients went for treatment to those who professed to treat and confined themselves to professing (for there was nothing beyond).

The changes which have taken place in our knowledge of diseases of the ear and in their treatment are not the only ways in which the practice of aural surgery has been affected. For more than 20 years past there have gradually been established out-patient departments and aural clinics at every one of our general hospitals, and in most provincial towns of any size there have arisen special hospitals for diseases of the throat and ear. No earnest student considers that he has properly qualified himself till he has attended for some time in the aural department; and he gains there a very considerable knowledge of ear disease and its treatment, so that when he commences practice he considers himself, and often rightly so, competent to treat ordinary cases which some years ago he would have sent for advice to an aural surgeon. Now when he seeks the help of a consultant it is only to obtain his assistance in the complete diagnosis of the case and its future treatment, which he himself, unless it is a case of a serious nature, carries out Inasmuch as treatment often involves manipulations in which the practised hand of the specialist might be more beneficial some will be found to say that patients would be more successfully treated if they had throughout been solely under the care of the specialist. Now, in my opinion this is a very narrow view to take of the situation. For one person who might possibly make a more rapid recovery in this way there are thousands who at this period throughout the length and breadth of the land are, by timely and judicious treatment by their medical attendant who has acquired his knowledge in the out-patient department, at our hands saved from those conditions which follow inflammatory processes within the middle ear, if these processes are allowed to proceed unchecked even for a few days. Never can the spread of knowledge in the long run be anything but good, and never let it be said that the specialist of to-day (how different from the specialist of 30 years ago!) regretted for a moment that any skill which he may have acquired had become the property of others by his teaching. I have practised my profession long enough to know that by the light which we have turned upon diseases of the ear at our clinics we have burned away, we have melted away, the areas of quackery which some years ago imposed upon the public to their loss and detriment to a degree unknown by the present generation.

I hope I may be excused for saying a few words upon a subject which is at this moment agitating the minds of some general surgeons and all aural surgeons. It is the operations which have for their object the protection of patients who are the subject of a disorder which renders them liable at any time to septicæmic poisoning and a rapid death. I refer to those who are suffering from suppuration within the midde ear. How attention is fixed upon this subject may be estimated by a glance at current otological literature which is full of it to the almost complete exclusion of any other. The last volume of the Transactions of the American Otological Society is almost entirely filled with papers and discussions on this matter and a most important paper on a new method of operation was read by Mr. C. A. Ballance only a few days ago before the Royal Medical and Chirurgical Society. On this intensely interesting question we are going through a crisis—a revolution in surgery. Let us remember that in all revolutions, however righteous, some mistakes must be made, for the man who makes no mistakes achieves nothing. In all revolutions it is not without profit to look back for a moment to their origin. There was a time not so many years ago when it was a recognised rule in surgery, and taught at every hospital to students, that the mastoid antrum should not be opened unless there was some redness, pain, œdema, or tenderness on pressure, or all of these symptoms—in short, the usual conditions of what was termed abscess. At this period the mortality from cerebral abscess and

meningitis was terrible, and surgical recognition was confined to the records of post-mortem examination. I shall not easily forget seeing in the year 1878 a patient with a recent perforation in the membrane and a profuse discharge, with a high temperature, who had had three severe rigors within 24 hours, with no symptoms of mastoid abscess, but in whom I made a wretchedly small opening into the antrum, letting out pus, and who made a rapid recovery. In the face of the methods of to-day I feel ashamed of the small opening. Now, in regard to the operations for cerebral and cerebellar abscess which between that date and the present have come into practice we must confess that they were initiated and performed by general surgeons such as Mr. A. E. Barker, Mr. Victor Horsley, Mr. Ballance, Dr. W. Macewen, and others. I feel it as right and just to say this as I do to say that the mastoid operations were initiated by aural surgeons—so on this great question the general and aural surgeons meet on common ground.

I believe that I speak for both divisions when I say that during the period which is to be expended in the perfection of these operations, there will be no feeling of jealousy as to the encroachment of one into the domain of the other—there will be some aural surgeons who will gladly avail themselves of the skill of the general surgeon, as, indeed, has been largely done in the case of such men as I have mentioned, and they, on the other hand, will be equally glad to obtain the help and opinions of aural surgeons whose great experience in the local condition and history of these cases will carry great weight in the selection of cases, suitable or unsuitable, for operation. At any rate, I believe I know that the one idea which will swamp all other considerations will be the security of life to each patient. You will forgive me if I am in any way presumptuous in speaking so plainly of a matter which is at the present time uppermost in our thoughts, but I feel confident that it will meet your wishes that I should refer to this part of our work which holds such a prominent position just now in British and foreign surgery.

A Clinical Lecture

ON

MENTAL DISSOLUTION.

Delivered at the Medical Graduates' College and Polyclinic on Jan. 31st, 1900,

BY G. H. SAVAGE, M.D., F.R.C.P. LOND.,

PHYSICIAN FOR AND LECTURER ON MENTAL DISEASE, GUY'S HOSPITAL; LATE SENIOR PHYSICIAN AND SUPERINTENDENT, BETHLEM ROYAL HOSPITAL.

GENTLEMEN,—I recognise the responsibility of my position in addressing you who are anxious-minded searchers after medical truth. It is not as if I had to sketch an outline suited for the ordinary medical student and yet time will only allow me to indicate the lines of my subject. The most powerful idea of the generation is evolution and with it a great deal has been said about dissolution and the process has been considered as if it were but the reversal of evolution. This is only very partially true for there are many things seen in dissolution to which evolution gives no clue. Much may, however, be learnt by the study of dissolution as to growth and development, and my endeavour will be to point out some of this in relationship to mental dissolution. I shall at once proceed to my subject in detail and I think it will be best to introduce typical cases into the body of the lecture rather than to begin with examples.

Dissolution is separation into parts or constituent elements, reduction of any body or mass to elements or atoms, destruction of existing conditions, disintegration, decomposition. Hughlings Jackson has said: "I have often urged that for the scientific study of maladies of the nervous system we should investigate them as dissolutions (reversals of evolution) of this or that portion of the nervous system." It is rather with the idea of following these indications that I have selected dissolution in relation to mental disease for my subject to-day. In looking at the various definitions of the word "dissolution" I think I prefer separation into constituent parts or destruction of existing conditions. It is hardly necessary to point out that every compound may resolve itself into simpler elements. The very power of growth means the power of passing from the more into the less definite, passing from the stable into the unstable, from the condition of reacting to few stimuli to that of being able to react to many and varying excitants. In dissolution we get a reverse process—the passage to simpler states. Dissolution may serve the geologist in his search for the elements of the rock, "weathering" or weather dissolution making clear what was hidden before; in the same way the breaking up of the complicated facial bones clears up their origin and relationships, and similarly we shall learn much from watching the forms assumed or disclosed by the disintegrating mind. It must at once be said that dissolution when properly studied must include temporary dissolution as well as that which is the result of normal wear and tear. We see parallelism in the temporary and the organic dissolutions. Thus a man suffering from drink, which for the time reduces his moral and mental level, has the same symptoms as the general paralytic who has progressive brain decay, and both resemble in some ways the decay due to old age. I say they resemble one another, but there are very marked differences. In studying dissolutions one has to remember that each structure varies in its stability and also in its power of resistance; the degeneration will depend in its character, too, on the causes of destruction. To put it concisely, there are some, I fear many, minds built on the jerry-builder's lines. They look all right, but they will not last long. Such degenerate persons come into the world only fit for very light work and they fail before they have reached any power or position; it is thus that certain boys and girls reach adolescence but get no further, their dissolution is progressive, and they pass into what resembles the undeveloped state of the imbecile.

There is then the class of dissolution in undeveloped persons and the symptoms as might be expected differ from those present in older patients. I only have time to say that they pass from defective self-control to impulsive violence, sexual excess, and mental weakness of a very marked and permanent kind. Then there are the cases of alcoholic dissolution which may be transient but on the other hand which may be permanent. In these cases the lines indicated by the temporary defects are generally followed by the more marked decay. The patient who during his drinking bouts becomes violent and aggressive with loss of all control of language, when he begins to become really and permanently weak as the result of continued excesses is equally violent, aggressive, and regardless of the conventions of his social surroundings. There is no doubt that the perfectly acting machine works without noise and it is equally true the perfectly fitting man best fulfils his functions quietly. In quietness we possess ourselves. One of the earliest and most marked signs of dissolution is want of resting power. This shows itself in constant movement, in perpetual talking, and in perpetual changes in occupation. I have seen many elderly ladies who wear their relations and maids to shadows by their constant movements. One no sooner is downstairs than she gets up to go to her room, when there turns out her various drawers and then leaves all in a muddle only to go down once more to return to another room or to another chest of drawers. In these patients as a rule there is defective memory and they do not recollect what they have done immediately before. The restlessness has seemed to me to resemble an "itch," and it may be associated with some skin irritability, so that such patients scratch themselves in any part of their bodies indelicately. I saw an aged lady the other day who with senility thought nothing of lifting up her dress in public and scratching her thigh. In some of these cases there is something more, a local sexual-organ irritability leading to sexual faults of various kinds to which I refer elsewhere. The perpetual talking is the evidence of defective education or is a kind of relapse into a lower form of culture. Dickens's characters said all they thought. The most cultured certainly consider that words, like Nature, should half-reveal and half-conceal the soul within. The older person with dissolution of his faculties will say all he is thinking and often seem incapable of tiring. A perfect logorrhœa is met with. Restlessness and changing occupation is often met with, but this is also associated with another type of mental disorder, namely, doubt. Some of the dissolving patients can never make up their minds

as to what they ought to do while others are ever from sheer restlessness moving from occupation to occupation. One rare and distressing symptom is that of swearing or saying aloud what one would rather conceal. I suppose all will admit that with temporary dissolution due to alcohol a man will say things and use words he would not when quite under self-control. I have seen a gentleman who when suffering from a mental dissolution, which fortunately for him did not go too far for recovery, used to swear like a trooper and used to be heartily ashamed of himself for his bad ways. Loss of temper—i.e., loss of higher control—is often associated with the saying and doing things alien to one's nature, so with the dissolution of age or disease this may occur.

With dissolution, from time to time one comes across patients in whom the decay is chiefly marked by sensory hallucinations. Such cases may give rise to trouble from legal or medico-legal points and I will relate two very interesting cases. I was called to the north of England to decide whether an old man who undoubtedly had hallucinations was in a state requiring his detention in an asylum. I found a well-preserved old man who had made a large fortune. He was an old bachelor who had lived near the seat of his wealth and surrounded by valuable pictures and a pleasant garden. It was said that in consequence of thinking there were burglars about and believing that he saw them he fired a revolver out of his bedroom window. He told me at once that he knew he saw things which others said did not exist, but still he believed they were real. He asked, for example, if I saw a stream running across the dining-room floor, and on my saying I did not he said he did, but that having doubts he had taken blotting-paper to see if it became wet; it did not, yet he felt there was an overflow from the cistern running over the floor. He took me to the window and asked if I saw the rabbits. He pointed out what he believed to be a family with the young ones running in and out of the laurel bushes. I said no such rabbits existed, and asked if he would shoot at them if he had a gun; at once he said "No," yet he fully felt they were there. This state of defect had lasted for several years, and it was decided by the Court of Chancery that though he was not fit to manage an estate worth over half a million yet that he did not require asylum treatment.

I saw a shrewd and successful gentleman who on my being introduced said he was glad to have a talk with a nerve doctor for he thought there was something wrong. Then he told his tale, which was that he was pestered by gangs of gipsies who appeared everywhere. He said that he had just come in from chasing them in his garden for wherever he looked out he saw them pulling up his shrubs. I said, "But the shrubs are not removed, how do you account for this?" He said, "Well, it is hard to tell but I still feel they do it, and when I wake in the morning I see the same gipsies using my tooth-brush and my hair-brushes; I jump up only to find they have disappeared." He admitted the absurdity of the whole thing, but yet he said he felt it was true and he must act upon his belief. What might have proved a serious loss followed the persistent hallucinations, for before I insisted on his withdrawing from all business he had on one Bank Holiday gone to his office to look through his private safe with its very valuable securities; before leaving he thought he saw his son in the adjoining office and told him to put the things away and to lock the safe. The son was a hallucination and it was only by accident that the son discovered the state of affairs before others arrived next day.

In some cases one sees an interesting intermediate state in these cases of progressive dissolution, the hallucinations only occurring during states of reduced vitality. I have seen such haunted by some hallucinations on waking in the early morning, and an illness like influenza may start the same morbid process.

Though not wishing to make too much of it, yet I feel that I should point out to you that a certain number of patients, most of whom later have had some serious nervous breakdown, such as apoplexy, have very well-marked hallucinations of smell. This is very interesting to me, for though I do not say that the disorder of the sense of smell is always associated with some sexual disorder, yet I have found that it is a very common experience to meet with hallucinations of smell in patients in whom there is some sexual trouble. We have, then, to remember that in many of these cases of nervous dissolution we get hallucinations of smell and also sexual perversions. I have met with several patients in whom the hallucinations of smell have given rise to social or even legal trouble in consequence of the accusations brought by the patient against sanitary and other authorities.

One of the most characteristic signs of mental dissolution is the loosening of the mental unity. The individual is no longer himself. He has slowly been built up to fit into certain definite positions and the higher his social position and his professional work the more highly specialised has he become; with early signs of dissolution he ceases to be nimble in his social and other relations; the lady offends her friends; the politician is no longer to be trusted by his party and the religious man begins to be lax in his observances. Though this may be the whole evidence of decay yet it is very common for the signs of decay to be more marked. Let me take examples. The wife of a public man, his right hand in all social work, began to lose grasp of things and caused confusion to her husband's interests by getting the wrong people to meet each other and by doing the wrong things socially. In another case a man who was the soul of honour, with dissolution began to forget his debts of honour. Then he borrowed money even from his servants and never paid it back. Another who had been dressy and precise became dirty and untidy, and I may say that self-neglect and a state of dirtiness are very commonly met with in this state of dissolution. I have known a man to lie in bed for weeks together without once getting up to wash. Honesty may suffer in the process of decay, but probably the symptom which causes most trouble is the neglect of morality. Men who have led the most pure and virtuous home lives not only neglect their wives but consort and become the prey of very coarse designing women. One patient of mine saw nothing peculiar in travelling openly with his mistress, while he wrote daily to his wife in affectionate terms and in his letters openly described what "we" were doing. Men of the most strict life when passing to mental weakness seem first of all to lose self-control, they also appear to lose all power of judging of how their conduct appears to others. A leading Dissenter when he began to fail in mind spent money lavishly on designing women and saw nothing either improper or unconventional in expecting his family to entertain, or at least to receive, women of doubtful antecedents. It therefore is to be remembered that persons in the earlier stages of mental dissolution often become changed in every way so that they pass from the moral to the immoral, from the quiet, peace-loving man to the boisterous roysterer. Sexual desire is increased or uncontrolled and it is not very uncommon for me to be consulted about mentally failing persons who have done some indecent or indelicate or immoral act. Old men exposing their persons to children or to women, old men who take liberties with small children, and those who even exhibit signs of sexual perversions—I have had several such cases in whom the evidence of misconduct was clear and yet it was hard to find any other sign of mental failure, and it is in these cases that the jury and judge may most cruelly punish one who is irresponsible.

In general, memory is looked upon as the gauge of dissolution but I have to qualify this a good deal, for though in senility there is what I might almost call a normal decay in registering power, yet similar defects can occur quite independent of any general process of mental decay, and in some cases of progressive loss of mental power the memory is retained. First then, there is frequently in mental dissolution gradual failure of memory for recent events and the memory seems to be slowly driven back as it were till only the events of early life are recalled. The old man forgets what he has done during the early part of the day, repeats the same question, and tells the same tales.

I have not time to trace the lines along which the decay spreads, extending as it does from the isolated independent memory to that which is more organised and associated. Here I would call attention to the fact that the memory of the long past may appear with unusual vividness so that there is, or appears to be, an increase in exactness in memory of the long past. I remember an old officer who astonished me by going into the minutest details in reference to his regiment and its officers—details of the most trivial nature. At first I thought that this was but the old man's power of romancing, but on investigating some few of the statements I found that they were true. I have on similar occasions been able to show the probability of a

clearing up of memory by denudation. This leads me to another important point. I have met with several patients who seemed to have gaps in their recent memories, so that they skipped from to-day back many years and confused the events of the past with those of the present. I have known the father forget the contrition of the prodigal son and wish to treat him as an enemy when he was by devotion attempting to atone for his youthful folly. In such cases serious legal complications might arise, because the father might act on his belief in the persistent wickedness of his son. Though such defects are common in mental dissolution, yet, as I have said, you may have progressive mental decay with little evidence of this. Thus in general paralysis of the insane the memory remains much longer active and good than would have been expected when you have to consider that there is a progressive decay of the highest nerve tissues. Again, great, almost absolute, defect of recent memory may be almost the only symptom of mental weakness. Such cases are met with most commonly in alcoholics. One patient of mine had no memory from moment to moment so that he could be got to repeat the same thing a dozen times in an hour without knowing that he had done the act before. This gentleman was fully able to reason on the past and though his memory became slightly more weak in sub-recent as well as recent affairs, yet he was in no way an example of a person passing through true mental dissolution. He was not progressively degenerating but only part of his nervous system seemed to be affected so that he could keep no recent sensory impression of any kind, and this leads up to the interesting subject of particular forms of memory and the special defects which may occur in them with age. Doubtless in dissolution, as I have said, the loss of power begins in the most independent and isolated impressions, but it may proceed to the more simple and organised; thus I have met with persons with mental dissolution who seemed to have no memory as to their appetite; they would eat and eat till they were sick and then begin again. There is not infrequently associated with mental dissolution an apparent increase of vigour, and I may here say that there is gain in some ways which is hard to explain. Many an old man sleeps more restfully than he has done for many years, his appetite and power of digestion are good, he has a return of sexual desire and on occasion sexual power as well.

I have already said that the rate of dissolution and the nature of the symptoms produced depend on the inherited and acquired nature of the whole nervous system. The restless, active-minded man might be expected to show the signs of wear and tear earlier than the more placid person, but this is not generally true. I see but few patients in whom dissolution is started by overwork, but I see a large number in whom the signs of decay are evident when the machine is slowing down. Men retire from very active pursuits to enjoy calm in old age and they do not get it. It is like the skater or the gymnast who while moving rapidly can do many things in which he would fail if he attempted while going slowly. So there seems as if there is a dissolution which I may compare to the rusting rather than the wearing out. Just as a healthy function should be unconscious, so soon as it becomes unhealthy it becomes first consciously, then painfully, evident. With early dissolution the unity, as we have seen, is broken and the harmony with it. Then come many uneasy feelings which receive various explanations. One patient will think that his body is seriously affected, that cancer has developed, that paralysis is imminent, or that he is suffering from some hidden but certainly fatal malady. With others various forms of melancholia occur among the signs of dissolution, the most common having the element of truth in them that they point to the decay which the patient says he feels. After all, the insanity rests in the interpretation of the morbid feeling.

Probably the most common interpretation of the morbid feeling of dissolutions is that which refers to poverty and the fear of the workhouse. This form of delusion is not confined to those who are suffering from mental dissolution, but it is more common among these than among others; it occurs chiefly in men or in women who have either had to earn their own living or else have had to manage their own business affairs. Every week I see some such case as the following. A healthy, active-minded man of very sensitive nature who has always had his hands full of work reaches the age of 70 years; he is still engaged in business, but he feels that he is not so young as he was and he is recommended to take rest and a holiday. This he does, but instead of being able to rest he cannot throw off the idea that something will happen to his affairs while he is away. He sleeps badly, he gets thin and worried, he can neither apply his mind to reading nor sight-seeing, his digestion suffers, and it is decided that he should return home. When he gets there he is more content for a short time, then the worries begin again; nothing assures him of his solvency, everything done in his absence involves him in disaster. He cannot sleep or rest and he becomes more and more the victim of his dreads. He is certain his bank is failing, that his clerks have robbed him, that he will soon be taken to prison as a fraudulent debtor, that all his professions of religion and philanthropy have been mockeries, and that the sooner he is dead the better. Such persons are very suicidal. Nothing will persuade the patients that the balance at the bank is all right or that the business affairs are in order; they say the proof you have brought them was right at the time but now some fresh thing has arisen which you do not understand and so reason is worthless and evidence of no avail. The weight of years and the interpretation of their gravity vary as I have said and this symptom is one of the most trying. It may lead to a melancholic ruin, the result of melancholic dissolution. There are many old wrecks who pass from active acute misery into the more chronic but hopeless form of the disorder and so live weaker in mind and suffering less acutely, but break up on rocks of melancholic delusions.

I have several times pointed out that the dissolution varies in form according to the original constitution and here I may say there are certain families in which the members being nearly all long-lived yet always end with prolonged depression. I have seen several such families. In one the members go on in useful public work till they are between 70 and 80 years of age when the first signs of physical decay occur; in one with gouty troubles, in another with neuralgias or respiratory troubles. Then comes the darker shadow of melancholia which may be thrown off once, or more frequently but sooner or later claims its victim. Under loss of higher control one has to consider the loss of control of the emotions. I suppose all of us who have passed 50 recognise that while we cannot leap and run as we did, and while we forget names and slight details that we also are more easily moved to express our emotions, at least some of them; a tale which we could have read aloud with expression and feeling enough to bring tears to the eyes of others did not affect us but now we struggle and stumble through the pathetic part with difficulty. At the theatre scenes affect us more readily than they did and yet we must recognise that the feeling is not increased, it is only the expression. That this is true must be known to all of us. The old man who loses his nearest relations does not suffer in the way a middle-aged man does and I have found but little difficulty in telling the worst news to very old people. With age then there is the loss of control not the increase of feeling; and this is parallel to what has been pointed out about other emotions, that the elder person may be sexually-minded but he may be impotent at the same time. In fact, Rabelaisian wit is suited to the older rather than to the younger men. Another exhibition of loss of control is seen in the violent passions which arise from small causes in many old persons. These storms are like the storm of passion in childhood which can be allayed rather by distraction than anything else. The passionate child must be interested in something out of the cause of trouble, and so with the old person we have to reckon with the facility of their emotions and to divert the stream.

In mental dissolution, then, we see various symptoms depending on defect of power and, as Hughlings Jackson has so often pointed out, with loss of power there is always a letting free of mechanisms which have been under control of the higher parts. So that with loss of power there is always a tendency to over-action on the one hand and defective action on the other. Dissolution may be regular in its progress or it may be irregular in its rate and also in the parts chiefly affected so that we cannot use any one faculty such as memory as a gauge of the depth of the dissolution. The effects of the dissolution will vary with the age of the individual and with his hereditary disposition. I have pointed out that, whereas certain persons seem built to last for very long periods before they break down along their nervous lines, others come into the world predisposed to break down with the first serious strain thrown upon them,

and this is commonly of sexual origin. Though the very word dissolution seems to imply a hopeless condition, I would wish to impress on you the fact that though most people who live long enough show signs of failure, yet many even of those with marked defects due to dissolution by fresh methods of accommodation manage to carry on the life's battle to the end.

Remarks ON FETISHISM IN SURGERY.

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If I were asked to define what is meant by this term, I should, I believe, best express it by "a tendency to mistake the relative value of the various objects sought to be obtained or the various facts which go to bring about the result desired"—an error in mental perspective, in short. And such an error may either be committed by elevating a factor of relatively little importance to an unduly high level or by unconsciously depreciating or ignoring one of primary rank. The same attitude of mind is usually responsible for both. Of course, the word, as ordinarily employed, denotes the elevation of a totally unimportant and unworthy thing to a position of honour, admiration, and even worship; but amongst educated and scientific men fetishism to this extent is absurdly impossible. Such finer shades of it as I have indicated, however, are not only possible but occur with some frequency.

Every teacher of practical surgery must have encountered the student who has a profound respect for some particular author. Any attempt to demonstrate to such a student a proceeding which has not been described in so many words by his dominating genius is rejected because Erichsen, Heath, or Jacobson, whoever it may be, has not included it in his work. "Erichsen doesn't say so," is to him a sufficient answer. No power on earth can make such a man work his own brain. He accepts and registers as final the teaching of the particular writer whose text-book is accepted at the medical school of which he is a member, and no argument has any effect on him. His fetish is the written word of the teacher whom he was very properly taught to respect and believe in during his studentship.

Not very far distant from this condition of mind is that of the man who devotes himself almost fanatically to the writings of a particular nation. Not long since it was the fashion always to quote German authors. The man who had at his tongue's end and could always quote glibly Martin of Berlin, Dührssen, Döderlein, Zweifel, Virchow, Koch, &c., with the magic references of *Berliner Klinische Wochenschrift*, *Sammlung Klinischer Vorträge*, *Centralblatt für Chirurgie*, &c., was always certain of an awed, respectful hearing from this class of mind, who accepted almost blindly any dictum which emanated from Germany. The thing must be final, for was it not written in somebody's *Archiv*? His fetish also was plain.

Little different is the case of the man who prides himself on being "up to date." Is any method of surgical procedure praised or advocated? That is not the latest, and *therefore* not the best. Some man in Japan or in some unheard-of village in Russia has "brought out" a later plan. What is the date of the former? 1856. Dear! dear! perfectly obsolete, of course. So-and-so of Platigorsk wrote a long article only last week in which the new method is described and above all things we must be "up to date" and swear by the latter, until in its turn it is displaced by another and still later method.

Now it will be noted that in all these cases there is an element which deserves respect, which is absolutely good in itself, and which only becomes wrong and misleading because it is dislocated, so to speak, from its proper place, and elevated to an undue prominence in the mind. Respect for the dicta of a teacher of the professional and mental rank of the names mentioned is most praiseworthy and to be encouraged. Respect for the painstaking, thorough, and usually complete work of the Germans has been well earned by them and should be ungrudgingly given. A desire to be acquainted with all that has appeared on our own special subject and not to be left behind and to become fossilised is absolutely necessary for all of us who desire to excel in our work. Accepted in due relationship to other and more important points, these are no hindrances, they are great helps. Elevated unduly in importance they become fetishes.

But fetishism is possible in minds otherwise constituted than those already considered. The modern surgeon is specially liable, it would seem, to fetishism in two directions, and the first is in that of undue importance attached to certain details in technique. No one who passed through it can have forgotten the controversy that raged between surgeons who used antiseptics and the "full Listerian method," as it was termed, and those who did not: the airs of impeccability that the first class—I was one of them—put on, and the sneers of the gentlemen who, in the elegant words of one writer in an American journal, "never bothered themselves about bacteria or bugs of any kind." Did the former lose a patient? the death was treated as of comparatively no importance—except as spoiling statistics—so long as the primary requisites had been complied with and the operation had been carried out under "complete antiseptic precautions." Some surgeons went even further, and not content with elevating the whole principle, almost worshipped some detail of it. A striking instance of this might be seen in the spray producer—that magnificent and imposing structure in brass, glass, and nickel-plate, which at one time was such a prominent feature in our operating theatres. Was the "spray" used? was the one essential question. If so, all was done that human ingenuity or skill could suggest, and if the patient was so wrong-headed as to die after that, well, it was his own fault, and no human power could have saved him. Now that the spray is relegated to the shelf does not the same tendency remain? and are we not tempted unduly to consider the importance of corrosive sublimate, hot air, steam under pressure, mercuric iodide, iodoform gauze, and a hundred other things according to the school in which we happen to have been taught, making these things principals, as it were, instead of looking upon them as simply means towards the one true end of all our work—the restoration to health of our patients? Some such feeling as this probably explains the opposition to Listerism of the late Sir William Savory and Mr. Lawson Tait, not to mention certain living writers.

The second direction is one of late date, but it bids fair unless checked to blossom into a fetish of great dimensions. In the old days, before our time, rapidity in operating was a point of first-class importance. When a patient was acutely conscious of every step in any operation he was the successful surgeon who could perform his work with lightning-like celerity. Every second of the awful bodily and mental anguish which could be spared to the unhappy victim was immense gain to his chances of life. But it must be remembered that operations in those days were almost limited to amputations. Take down any work, Chelius or Ambroise Paré, for instance, and turn up abdominal, gynæcological, or cranial surgery. The two former will be found to be almost non-existent, as we know them to-day, and the latter reduced to trephining, an operation usually performed under nature's own merciful oblivion. Every step of an amputation was known and had been practised many times beforehand. There was no careful separation of adhesions as in modern pelvic surgery, which process has frequently to be done before the surgeon can even be sure what it is he has to deal with or can decide what particular operative procedure has to be carried out; the position, size, and condition of all vessels were matters which had become commonplaces; there was scarcely a possibility of the surgeon being for one moment in doubt. How different in every way from the removal of an old pyosalpinx, buried in adhesions, with the imminent danger of rupture of the sac itself during the process, or the possible division of a ureter, or the perforation of an adherent loop of intestine. Once anæsthesia was introduced with its splendid elimination of mental and physical suffering, procedures never before possible came within the range of practicability, and the race with time became no longer an absolute necessity. It sank to the level of a factor of the third grade, and security with perfection in final results rose, as they ought to do, to the level of the second—the main end being now, as always, the recovery of the patient. But quite lately, as I have said, a most determined effort from a quarter which commands respect has been made to raise speed

again to the level it originally occupied. Once more the skill of the surgeon, and, indeed, his reputation, is to be measured by the chronometer, and with the aid of the latest scientific—and popular—invention, the kinematograph, the powers of various men are to be judged of by the rapidity of their work. Not only so, but these records are to be handed down to posterity, and the operator is to be made to feel that he is not merely pitted against his contemporaries, but against all the surgeons of the future in this and all other countries. May it not follow as a matter of course that we shall vie with one another as to the rate at which we can open the abdomen, tear out the tumour, and sew all up again before the accusing film can have run half its course? Unfortunately the kinematograph will not record the after-condition of the patient, or the deaths which will inevitably follow from secondary or consecutive hæmorrhage, sepsis, or the miseries due to new adhesions, fæcal fistula, and the like. Rapidity in operative work is to be made a fetish, to which we shall all, for a time at least, have to bow.

All, I say, but that is not so. Level-headed surgeons—and they are the majority—will, I am certain, refuse. Rapidity, like all other things which carry with them this possibility of fetishism, is a good thing—a thing to be aimed at in its due proportion. Its opposite—dawdling or fumbling—is most strongly to be avoided, to be reprobated. But rapidity is good only when used in its true and fitting relation to other things. Always the main end to be kept in view is the sound and perfect restoration to health of the patient; and we must get that, or as near to that as possible, by the use of all these means in their due relation to one another.

The risks of undue rapidity—of racing—are many. Consecutive hæmorrhage is one of the most likely to occur. I watched carefully the reproduction of a hysterectomy by kinematograph at Edinburgh, and one of the things which struck me most forcibly was the extraordinary behaviour of the vessels in the abdominal wall. One stroke of the operator's knife and the abdominal cavity was open, one wipe down by the assistant with a piece of lint and all bleeding from the cut edges ceased. To go no further, what became of those vessels? Not a single pressure forceps was placed, not a vessel was ligatured, but there was no further bleeding—from those parts at least. I appeal to any surgeon who has ever done abdominal section if this is credible? If all parts are to be treated in the same way deaths from peritonitis afterwards are certain to be many. Clark and Waterhouse have shown that the peritoneum can deal with bacteria to a great extent if it is clean, but if any appreciable clots of blood are left behind or find later entrance peritonitis is promptly set up by the septic changes induced in such clots, where bacteria find a fitting breeding ground and immunity from rapid absorption and phagocytosis. Vessels treated in this lightning fashion will certainly bleed afresh when the force of the circulation recovers itself after the patient has returned to bed, when all is closed up and the mischief can progress unseen until it is too late to remedy. Will the kinematograph be re-introduced into the sick room and record for us the gasping, restless tossing of the exsanguine victim who is bleeding to death into her own abdominal cavity; or the hurried, anxious—often, alas! useless—groping of the surgeon with imperfect aid and light for the vessel now retracted into the subperitoneal tissues, or hidden under constantly increasing clot—that vessel which might so easily have been safely and finally secured in the morning had not the surgeon been racing against time in his devotion to the latest fetish of all—rapidity.

No protest can, I conceive, be too forcible against this new development of our art. Quick, nervous, prompt work is most desirable, but as all good things are liable to abuse, and such abuse is detestable in proportion to the very excellence of the thing abused, so racing in operative work is certain to entail results which will be as deplorable as those produced by careful rapidity are admirable. In surgery, as in everything else, a due perception of the proper perspective of things is absolutely necessary to produce perfect work.

Manchester.

TIVERTON INFIRMARY AND DISPENSARY.—The annual meeting of this institution was held recently under the presidency of Sir John Heathcote-Amory. The report showed that 1293 patients had been treated. The Victoria Wards, opened in August last by Lady Northcote, were now used by patients.

EIGHTY SUCCESSIVE CASES OF STACKE'S OPERATION.

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THE following consecutive series of 80 cases in which I have performed the radical mastoid operation (Stacke's) in cases of chronic suppurative otitis media serves to illustrate the symptoms demanding the performance of that operation and the beneficial results that may be expected. It should be premised that in all cases the procedure must be considered exploratory until the cavity of the antrum has been exposed, and by no method that I know can the medical man foretell with certitude what will be revealed. Broadly speaking, Stacke's operation consists in laying open the mastoid antrum and any diseased mastoid cells connected with it, opening the aditus leading from the antrum to the attic of the tympanum, cutting away all overhanging bone, removing the posterior wall of the osseous meatus, and in some cases removing the malleus and the incus. All morbid products, such as cholesteatoma, pus, granulations, and diseased bone, are then removed, the cavity is thoroughly cleansed and disinfected, the cartilaginous meatus slit, and the upper and lower flaps are cut away. This series of 80 cases could be increased to 124 by inclusion of 44 cases of Schwartze's operation, a procedure of similar import except that the posterior osseous wall of the meatus is left intact. All these additional cases have resulted in recovery. It should also be added that concurrently my colleague, Dr. Dundas Grant, has had a similar series of cases of something like equal number. I think I may say that the success of both of us has been largely due to mutual conference and coöperation.

The indications for the performance of the operation are various. Together with persistence of purulent discharge one or other of the following symptoms was presented by these patients previously to operation: pain in the affected ear or corresponding side of the head, vertigo, nausea, vomiting, and general malaise; in some cases there were mental lassitude and a sullen demeanour. In most of them one or more of the following conditions was present: polypi or granulations in the tympanum, tenderness over the mastoid process, swelling of the meatus, bulging downwards of the posterior superior wall of the meatus and the adjacent part of Shrapnell's membrane, facial paralysis, caries of the ossicles or dead bone felt by the probe in the walls of the cavum tympani. The symptoms and physical conditions mentioned were rarely found singly but were mostly grouped in varying proportions. In every case the necessity for the operation was fully proved by the discovery of granulations, cholesteatoma, or necrosed bone, in the antrum or in the surrounding parts. In several of the cases it was necessary in the course of the operation to lay bare the dura mater in the middle fossa of the skull, to a greater or less extent, by the removal of a lamina of necrosed bone in the roof of the antrum. For the same reason the groove of the lateral sinus also was sometimes exposed in taking away a small piece of its bony wall. It was only occasionally that the mastoid cells became involved and required to be dealt with.

In recommending the operation the question of the effect upon the hearing power was naturally of but secondary consideration. It is, however, gratifying to report that audition was seldom rendered worse by the performance of the operation, while in some cases it was materially improved, probably owing to the removal of the accumulations of pus, granulations, and cholesteatomatous material which had filled the tympanum and so prevented the sound waves from reaching the labyrinth.

An examination of the appended table shows that out of the 80 patients operated on 45 were females and also that in 49 cases the left was the ear affected. The preponderance of the female sex among the cases cannot be explained, for it is contrary to the statistics of the hospital with regard to all diseases of the ear, both acute and chronic. The preference for the left ear is in accordance with what is generally noted with regard to deafness, but especially in cases accompanied with any degree of acuteness of inflammation. Lennox Browne[1] found that in 32 cases of othæmatoma the left ear

[1] Othæmatoma, or the Insane Ear, West Riding Asylum Medical Reports, vol. v., 1875.

EIGHTY SUCCESSIVE CASES OF STACKE'S OPERATION: TABULAR STATEMENT.

No.	Sex.	Age.	Ear.	Duration.	Symptoms previously to operation.	Date of operation.	Remarks.	Result.
1	F.	20	R.	18 years.	Recurrent polypi.	Oct. 13th, 1896.	Granulation tissue and cheesy matter in the antrum.	Cured.
2	F.	6	L.	—	Pain, nausea, and giddiness.	Oct. 31st.	Antrum contained granulation tissue.	,,
3	F.	27	L.	—	Pain and giddiness.	,, ,,	Granulation tissue and cheesy matter; dura mater exposed in the middle fossa.	,,
4	M.	10	R.	—	Headache and mental dulness.	Nov. 20th.	Fœtid pus in the antrum and granulation tissue.	,,
5	F.	25	R.	8 years.	Recurrent polypi.	Feb. 5th, 1897.	Cholesteatoma in the antrum.	,,
6	F.	17	R.	12 ,,	Recurrent polypi.	March 5th.	Granulation tissue in the antrum; lateral sinus exposed.	,,
7	F.	19	L.	15 ,,	Recurring polypi, pain, and giddiness.	,, 12th.	Antrum was very large, full of granulation tissue.	,,
8	F.	13	L.	5 ,,	Swelling over the mastoid; pain.	May 6th.	Mastoid cells, antrum, and attic were full of granulation tissue and pus.	,,
9	F.	12	R.	4 ,,	Pain, giddiness, and recurring polypi.	,, 13th.	Cholesteatoma in the antrum.	,,
10	M.	14	L.	5 ,,	Swelling over the mastoid; pain.	June 4th.	Pus and granulation tissue in the mastoid cells and antrum; the incus was removed.	—
11	F.	23	R.	17 ,,	Pain, nausea, and giddiness.	,, 8th.	Mastoid cells and antrum contained pus and granulation tissue; the incus was removed.	Cured.
12	F.	25	L.	9 ,,	Recurrent polypi and pain.	,, 18th.	Antrum was deep; granulation tissue.	,,
13	F.	29	L.	20 ,,	Pain and giddiness.	July 16th.	Antrum was very deep; granulation tissue.	,,
14	M.	13	L.	—	Pain and recurring polypi.	,, 26th.	Antrum was full of granulation tissue.	,,
15	M.	7	L.	14 days.	Sinus over the mastoid leading into the antrum.	August 3rd.	Antrum was full of granulation tissue and cholesteatoma.	,,
16	F.	32	L.	14 years.	Facial paralysis, vomiting, and pain.	Oct. 21st.	Pus and granulation tissue in antrum.	,,
17	F.	17	R.	15 ,,	Nausea, pain, and giddiness.	Nov. 19th.	Granulation tissue and cholesteatoma in antrum.	,,
18	F.	25	R.	12 ,,	Pain, giddiness, and nausea.	,, 30th.	Pus and granulation tissue; dura mater of the middle fossa and lateral sinus were exposed.	,,
19	F.	11	L.	8 months.	Recurring polypi, pain, and facial paralysis.	,, ,,	Mastoid cells were necrosed; antrum was full of granulation tissue; lateral sinus was exposed.	Facial paralysis. Cured.
20	M.	28	L.	20 years.	Recurring polypi, extreme pain, nausea, and giddiness.	Dec. 6th.	Full of granulation tissue; lateral sinus covered with granulation tissue and thrombosed; left internal jugular filled with pus.	Died Jan. 6th, 1898.
21	F.	40	L.	38 ,,	Irritability, giddiness, nausea, shivers, and pain.	Jan. 18th, 1898.	Antrum was very deep; cholesteatoma.	Cured.
22	M.	13	L.	12 ,,	Polypi; recurring facial paralysis.	March 15th.	Full of granulation tissue; lateral sinus was exposed.	Facial paralysis. Cured.
23	F.	26	L.	20 ,,	Nausea, pain, and giddiness.	April 19th.	Granulation tissue and cholesteatoma; necrosed bone.	Facial paralysis. Well in nine months.
24	F.	36	R.	25 ,,	Pain, shivering, vomiting, and giddiness.	,, ,,	Granulation tissue.	Facial paralysis. Well in six months.
25	F.	10	L.	6 weeks.	Mastoid swelling; fistulous opening leading into the antrum.	,, 26th.	Granulation tissue; lateral sinus covered with granulation tissue.	Cured.
26	M.	30	R.	25 years.	Recurrent polypi and repeated attacks of giddiness.	,, ,,	Antrum deep; full of granulation tissue and cholesteatoma.	,,
27	F.	17	L.	1 year.	Pain, sickness, and polypi.	May 24th.	Antrum filled with granulation tissue.	,,
28	F.	13	L.	2½ years.	Semi-unconscious; head well retracted; bulging of the posterior superior meatal wall.	June 15th.	Cerebellar abscess. (Published in the *Journal of Laryngology*, October, 1899.)	,,
29	F.	1½	L.	12 months.	Polypi, mastoid swelling, and necrosed bone.	,, 18th.	Disease of the whole temporal bone; antrum was full of granulation tissue and cholesteatoma.	,,
30	M.	9	L.	—	Mastoid swelling.	July 9th.	Mastoid cells full of pus, also antrum, and attic, with cholesteatoma.	,,
31	F.	15	L.	5 years.	Pain, nausea, and giddiness.	,, 19th.	Mastoid cells and antrum full of granulation tissue; lateral sinus exposed.	,,
32	M.	10	R.	—	Mastoid swelling; sinus in the bone leading to the antrum.	,, 26th.	Carious bone in the mastoid cells; antrum enlarged, containing pus and cholesteatoma.	,,
33	M.	22	L.	—	Stenosis of the meatus, pain, and giddiness.	August 16th.	Antrum filled with pus and granulation tissue.	,,
34	F.	19	L.	3 years.	Facial paralysis.	,, ,,	Antrum full of cholesteatoma; incus was removed.	,,
35	M.	18	L.	—	Delirious, rigors, swelling over the mastoid, and great pain.	,, 20th.	Pus over the mastoid and in the antrum; extradural abscess.	Died August 22nd.

EIGHTY SUCCESSIVE CASES OF STACKE'S OPERATION: TABULAR STATEMENT.

No.	Sex.	Age.	Ear.	Duration.	Symptoms previously to operation.	Date of operation.	Remarks.	Result.
36	M.	23	L.	3 weeks.	Mastoid swelling.	Sept. 3rd.	Full of granulation tissue filling the antrum, and also found on the lateral sinus.	Cured.
37	M.	8	L.	4 years.	Mastoid swelling, sinus in the bone leading to the antrum, and pain.	Oct. 5th.	Mastoid cells and antrum full of pus and granulation tissue.	,,
38	F.	20	L.	16 ,,	Pain, vomiting, and giddiness.	Nov. 8th.	Antrum full of pus and cholesteatoma.	,,
39	F.	15	L.	2 ,,	Subject to epileptic fits; no cause.	,, 8th.	Small granulations and carious bone in the attic.	Cured. Fits not improved.
40	M.	8	L.	7 ,,	Polypi recurring, drowsiness, and pain.	,, 29th.	Antrum full of large granulation tissue, also attic.	Cured.
41	F.	6	L.	3 ,,	Fistulous opening in the mastoid leading to the antrum.	Dec. 12th.	Mastoid cells and antrum full of granulation tissue; granulations over the lateral sinus.	,,
42	M.	8	L.	2 ,,	Mastoid swelling.	,, 17th.	Antrum full of granulation tissue and pus.	,,
43	M.	8	R.	7 ,,	Mastoid swelling; sinus leading to the antrum.	Jan. 2nd, 1899.	Pus and granulation tissue in the mastoid cells and antrum.	,,
44	F.	13	L.	2 ,,	Recurring polypi.	Jan. 31st.	Antrum full of cholesteatoma and lateral sinus exposed.	,,
45	M.	7	L.	3 ,,	Pain, nausea, and giddiness.	Feb. 2nd.	Antrum very deep; granulation tissue.	,,
46	F.	20	R.	17 ,,	Giddiness and pain.	,, 21st.	Antrum full of granulation tissue.	,,
47	M.	13	L.	8 ,,	Mastoid swelling, pain, and nausea.	,, 25th.	Antrum opened, full of pus and granulation tissue.	—
						March 2nd.	Extradural abscess.	—
						,, 10th.	Lateral sinus thrombosis; internal jugular vein tied.	Died March 21st. Empyema of the chest.
48	M.	19	R.	—	Mastoid swelling; fistulous opening leading to the antrum.	Feb. 28th, 1899.	Pus in the antrum and granulation tissue.	Cured.
49	M.	24	R.	—	Pain, giddiness, and nausea.	March 14th.	Antrum very deep; pus and granulation tissue.	,,
50	M.	19	R.	12 years.	Recurring polypi, pain, and drowsiness.	April 11th.	Carious bone removed, antrum full of granulation tissue. Lateral sinus exposed.	,,
51	F.	22	R.	10 ,,	Pain, giddiness, and nausea.	May 9th.	Dura mater of the middle fossa exposed; antrum full of granulation tissue.	—
52	M.	32	R.	10 ,,	Giddiness, pain, and nausea.	,, 16th.	Antrum contained cholesteatoma.	—
53	F.	14	R.	10 ,,	Pain and nausea.	,, 30th.	Fistulous opening into the antrum; lateral sinus completely exposed.	—
54	F.	25	L.	20 ,,	Had attacks of epileptic convulsions.	June 2nd.	Antrum contained granulation tissue.	Cured.
55	F.	33	R.	20 ,,	Depression of spirits, pain, giddiness, and nausea.	,, 6th.	Antrum full of cholesteatoma.	,,
56	M.	20	R.	—	Mastoid swelling, pain, and giddiness.	,, 11th.	Antrum full of pus and granulation tissue; extradural abscess.	,,
57	M.	29	L.	—	Pain, nausea, and giddiness.	July 18th.	Antrum and attic full of granulation tissue and cholesteatoma.	—
58	M	28	L.	20 years.	Pain and recurrent polypi.	,, 25th.	Antrum contained granulation tissue.	
59	F.	37	R.	5 ,,	Pain, nausea, and giddiness.	August 1st.	Antrum and attic full of cholesteatoma.	Cured.
60	F.	32	R.	—	Facial paralysis and pain.	,, 22nd.	Antrum and attic full of granulation tissue and cholesteatoma; lateral sinus was exposed.	,,
61	M.	24	R.	2 years.	Pain, vomiting, giddiness, and bulging of the meatal wall.	,, ,,	Temporo-sphenoidal abscess.	,,
62	F.	15	L.	—	Swelling over the mastoid; pain.	,, 29th.	Fistulous opening into the antrum, pus, and granulation tissue.	,,
63	M.	40	L.	30 years.	Pain, nausea, and giddiness.	,, 31st.	Antrum full of granulation tissue.	,,
64	F.	16	L.	11 ,,	Vertigo, sickness, and pain.	Sept. 5th.	Antrum contained granulation tissue and necrosed bone.	,,
65	F.	26	R.	20 ,,	Recurrent polypi.	,, 26th.	Antrum contained granulation tissue.	,,
66	M.	41	L.	11 ,,	Pain, papillitis, and giddiness.	,, ,,	Antrum contained granulation tissue and cholesteatoma.	,,
67	F.	16	R.	6 months.	Pain and giddiness.	Oct. 3rd.	Antrum contained a cholesteatomatous cyst.	,,
68	M.	37	L.	12 years.	Pain and recurring polypi.	,, ,,	Antrum contained granulation tissue and cholesteatoma.	,,
69	F.	28	L.	18 ,,	Pain, nausea, and giddiness.	,, 10th.	Antrum was deep and contained granulation tissue and cholesteatoma; dura mater of the middle fossa was exposed.	,,
70	M.	24	L.	20 ,,	Pain, vertigo, and nausea.	,, ,,	Antrum was large and contained a brown fluid and cholesteatoma; dura mater of the middle fossa was exposed.	,,
71	M.	30	L.	20 ,,	Giddiness.	,, 17th.	Antrum contained granulation tissue and cholesteatoma.	,,

EIGHTY SUCCESSIVE CASES OF STACKE'S OPERATION: TABULAR STATEMENT.

No.	Sex.	Age.	Ear.	Duration.	Symptoms previously to operation.	Date of operation.	Remarks.	Result.
72	F.	29	L.	25 years.	Pain, nausea, and giddiness.	Oct. 17th.	Antrum contained granulation tissue; dura mater of the middle fossa was exposed.	Cured.
73	M.	62	R.	4 months.	Mastoid swelling, pain, and nausea.	,, 31st.	Fistulous opening leading to the antrum full of pus and granulation tissue.	,,
74	F.	29	L.	12 years.	Pain, giddiness, and nausea.	,, ,,	Antrum full of granulation tissue and cholesteatoma.	,,
75	F.	23	L.	20 ,,	Pain, giddiness, and nausea.	Nov. 7th.	Antrum contained granulation tissue.	Recovery.
76	F.	30	L.	20 ,,	Pain, giddiness, and nausea.	,, 23rd.	Mastoid cells and antrum contained granulation tissue.	,,
77	M.	13	R.	10 ,,	Pain, giddiness, and nausea.	,, ,,	Antrum very deep, contained granulation tissue.	,,
78	M.	5	L.	—	Mastoid swelling and pain.	,, 28th.	Fistulous opening leading into the antrum containing granulation tissue.	,,
79	M.	26	R.	14 years.	Pain, nausea, and giddiness.	,, ,,	Antrum was very deep and contained granulation tissue.	,,
80	F.	24	L.	18 ,,	Pain, nausea, and giddiness.	Dec. 12th.	Antrum contained granulation tissue; lateral sinus exposed.	,,

For the notes of these cases I am indebted to my colleague, Mr. Chichele Nourse, who has more especially followed their progress.

was affected in 19 instances, in both ears in 11, and the right ear only in two cases. In those cases in which both were affected the left ear was first attacked. His explanation of the fact is the nearer position of the left common carotid to the heart and the more direct and less impeded arterial supply to the left than to the right side of the head, this observer noting, also, that arachnoid cysts so frequent in that form of mental disease in which othæmatomata may be expected are more commonly found on the left than on the right hemisphere of the brain. The average age of the patients is between 20 and 21 years, the youngest subject being 14 months old. The average duration of the suppurative disease in those cases where it could be ascertained was 12½ years.

Turning now to the symptoms exhibited by patients before the operation, persistent suppuration of the middle-ear was present in all and pain was very commonly complained of. 39 of the patients were troubled with attacks of vertigo, in 19 there were recurrent polypi, and in 17 there was swelling over the mastoid process. Facial paralysis was present before the operation in five cases and mental disturbance was noted six times. In two cases of old-standing suppuration (Cases 39 and 54) the operation was mainly undertaken in the hope of curing the epileptic fits to which the patient had recently become subject. Though the conditions discovered proved that the operation was abundantly justified the fits showed no improvement in Case 39, but a complete cure resulted in Case 54. The original disease was complicated by septic phlebitis of the lateral sinus and the internal jugular vein in two instances and by extradural abscess in three. Cerebral abscess was found once and cerebellar abscess once. At the time of the operation dead bone was discovered and removed in seven cases. In 11 a fistulous opening led from the surface of the mastoid process to the antrum. The middle fossa of the skull was exposed six times during the operation and the groove of the lateral sinus was laid bare in some part of its course 14 times. The cerebral and cerebellar abscesses were successfully located and drained and in one fatal case the internal jugular vein was tied. In two cases facial paralysis appeared after the operation, but in both it disappeared again within nine months. Except in those patients—three in number—whose condition was almost beyond hope on admission the results of the operation were uniformly successful.

With regard to the results of this operation the mortality in my hands has been practically *nil*, for the only three deaths reported were brought into the hospital in a very advanced stage of pyæmic poisoning. In the successful cases the threatening symptoms quickly disappeared, the change from sullen stupidity to lively intelligence being very noteworthy. Occasionally a slight purulent discharge continues for some time; but owing to the freedom with which the adjacent cavities have been placed in communication with the now very wide meatus no accumulations can possibly occur, and the whole tympanum, antrum, and attic gradually become soundly healed and can be inspected at any time by means of a speculum. In conclusion, my experience leads me to the opinion that it is safer to operate at an early period of suppurative disease, should there exist any of the enumerated indications for it, rather that wait until the processes have had time to produce signs of a more threatening character, and possibly to infect some of the intra-cranial contents.

Harley-street, W.

CONSANGUINEOUS MARRIAGE AND DEAF-MUTISM.

BY ALFRED H. HUTH,

AUTHOR OF "THE MARRIAGE OF NEAR KIN."

THE question of the intermarriage of the deaf and its consequences has excited attention almost ever since deaf-mutism itself has been studied, and very various opinions have been expressed upon the subject. On the one side is the remarkable fact that frequently none of the children of deaf parents are deaf, while on the other side we have the indisputable fact that deafness is as strongly inherited as any other disease of the nervous system. In short, this is another example of the now generally accepted axiom that inheritance equals the sum of the ancestry divided by the number of the ancestors, and since there is, at present at least, no deaf race of human beings so the inheritance of deafness must be proportionately uncertain. In the absence of reliable statistics it is difficult to ascertain how far this inheritance is likely to be intensified by the intermarriage of the deaf. Such marriages are not very common in Europe. In the United States, however, where for the last half-century a great deal of attention has been paid to the education of the deaf and where consequently they have been more intimately brought together, so much intermarriage has gone on as to excite the alarm of many observers. In 1884 Dr. Graham Bell, the well-known creator of the Volta Bureau of Washington, published his "Memoir upon the Formation of a Deaf Variety of the Human Race," and now Dr. Fay comes forward with an elaborate inquiry into the result of "Marriages of the Deaf in America." By means of circulars and other investigations Dr. Fay has collected a grand total of 3078 marriages, sufficiently reported for conclusions to be

drawn from them, and which he has reason to believe represent all the marriages of this kind which have taken place in the continent of North America within a given period. These results he has tabulated and analysed and, as far as the figures allow, he shows that the average of sterility is not greater among such marriages than among the general population; that marriages where both the parties are deaf do not intensify the chance of deafness being inherited by the children, but double it; that since deafness is due to a variety of causes, parents are less likely to transmit their defects whose deafness is due to different causes; and that congenitally deaf parents are far more likely to transmit their deafness than are those who have become deaf since their birth. As to the vexed question as to the effect of consanguineous marriages, he comes to the conclusion that they have no effect beyond the ordinary laws of inheritance—that is, that the probability of inheritance by the children of the defects of their parents is not intensified by the relationship, but is proportionate to the amount of deafness in the ancestry.

Dr. Fay's inquiries only apply to marriages of the deaf, and these, in so far as they were sufficiently reported, numbered, as I have said above, 3078. From these we must, however, deduct 434 marriages which were barren, or 14·1 per cent., leaving 2644 productive marriages, which produced 6782 children. Of these 290 children died before it could be ascertained whether they were deaf or not, and 588 were deaf. As the result, therefore, of 2644 marriages there were 588 children who were deaf and 5904 children who could hear, thus giving 9 per cent. of deaf children and 2·45 children for each productive marriage. Among the 3078 cases of marriage of the deaf Dr. Fay notes 31 cases of consanguineous marriage in various degrees, but he nowhere states how many of these were barren. I can only trace the following from his material:—

Consanguineous Marriages producing Deaf Offspring.

Relationship.	Number of marriages.	Number of children.	Number deaf.
Aunt and nephew	1	4	3
Second cousins	4	17	5
"Cousins"	12	31	9
Total	17	52	17

But in these there is no information regarding the offspring of two marriages of "cousins," one marriage was barren, and in one the number of children is not stated, but "all" were hearing children. Clearly, therefore, at least four marriages must be deducted from the 31 cases. The result is as follows:—

Result of Marriages of the Deaf which produced Offspring.

Relationship.	Number of marriages.	Number of children.	Number deaf.	Children per marriage.	Percentage of children deaf.
None ...	2617	6392	558	2·44	9·2
Consanguineous.	27	100	30	3·7	30·0

We must remember, however, that here only those consanguineous marriages of the deaf which produced at least one deaf-mute are compared with marriages of the deaf most of which produced no deaf offspring, and therefore the comparison is without value. In any case, even taking Dr. Fay's total number of 31 consanguineous cases, the number is far too small to draw any reliable conclusions from. I have, however, drawn from Dr. Fay's material 302 cases of consanguineous marriage which I have tabulated. They do not represent the liability of consanguineous marriage to produce deafness, but appear solely because they have produced deaf children, and therefore the only value of the table is to show that nearness or distance of relationship is without effect. Indeed, we find that the most distant relations produced 100 per cent., first cousins produced 42 per cent., while fourth cousins produced 75 per cent.

Results of Marriages between Relations which produced Deaf-mutes.

(From Fay's "Tabular Statement," including Non-congenital Cases.)

Relationship.	Number of marriages.	Children. Deaf.	Children. Hearing.	Children per marriage.	Percentage of children deaf.
Nephew and aunt	1	3	1	4·0	75·0
First cousins	9	29	40	7·67	42·0
Second cousins	55	109	178	5·2	38·0
Third cousins	26	44	63	4·0	41·1
Fourth cousins	7	15	5*	3·1	75·0
"Cousins"	190†	387	675	5·6	36·5
"Related"	10	26	30‡	5·6	46·4
First cousin once removed	3	14	11	8·3	56·0
Second cousin once removed	1	4	—	4·0	100·0
Totals	302	631	1003	5·41	38·6

* "Several" hearing children are put down as three.

† Omitting four cases insufficiently reported and two with no deaf offspring.

‡ Five "unknown" are entered as hearing children.

Although, however, there is no evidence that consanguinity produces deafness, or, indeed, as I have shown in my "Marriage of Near Kin," any other disease, it is not advisable on the grounds of heredity for a deaf person to marry a relative when there is deafness or even a tendency thereto in the family. Dr. Fay found that nearly 21 per cent. of the children where at least one of the parents was deaf and both parents had deaf relatives were themselves deaf; under the same circumstances, but where only one of the parents had deaf relatives, only 6·4 per cent. of the children were themselves deaf; while where there were no deaf relatives only 1·2 of the children were themselves deaf.

Dr. Fay's statistics have a very considerable value for two reasons. First, that they are all derived from one nation and probably represent the whole of the deaf population of that nation over a considerable period; and, secondly, that they are not taken from asylums—that is, working back from the pupils to their parentage, but are an investigation of the results of the marriages of the deaf. Nearly all of the statistics on the subject which had appeared before were derived from an investigation of the relationship between the parents of the children in asylums. The difference between the two is radical. Where there is deafness in the family the proportion of deaf children per family is very much greater than the proportion of deaf children per family in the general population. Hence if an undue proportion of children derived from consanguineous marriages appears in asylums, it does not follow that consanguineous marriages on the whole, including those where there is no deafness to inherit, produce an undue proportion of deaf children. Moreover, the reports from the various asylums are founded on so small a number of cases and are so biased by the preconceived opinions of the reporters that they require very careful investigation and verification.

In the year 1889 the Royal Commission on the Blind, the Deaf, and the Dumb, &c., reported on the result of their inquiries. Among these was the effect of consanguineous marriage on the production of deafness. As to this they say, "We think from the evidence and statistics before us that consanguineous marriages should be strongly discouraged, especially where deafness has occurred in the family." The last part of this sentence is merely a reference to the ordinary laws of inheritance; but what evidence had they before them for recommending the discouragement of consanguineous marriage where there was no history of disease in the family? Mr. L. van Ofen, one of the Commissioners, dissents entirely from this recommendation. "I have

carefully examined the evidence of the various witnesses," he says, "on this point, and I find that as a rule they either rely upon general impression or upon the fact that they have known a certain number of deaf-mutes whose parents were first or second cousins, without having investigated whether there were any other circumstances, such as deafness in the ancestry or collateral relatives of such parents, and without knowing whether the proportionate number of such cases—viz., marriages of blood relations having deaf offspring—was larger than the proportionate number of such marriages to the general marriages of the district. I do not deem it desirable or necessary to argue upon or refute the evidence of witnesses who base their evidence upon conjecture, though much might be said against the conclusions they arrive at, and in some instances their assertions could be entirely disproved. ..... As regards ..... the returns made by the institutions ..... I find that they are so imperfect that no satisfactory statistics can be made from them. ..... Until more correct records are kept and the statistics are more carefully compiled I think that no reliable deductions on this point can be drawn from them." Mr. van Ofen's strictures are amply confirmed by the published evidence. Some of the witnesses did not hesitate to pronounce an unqualified opinion against consanguineous marriage without advancing, or apparently being able to advance, a particle of evidence in support of their views. Others did the same on perfectly ridiculous evidence. Then there is the evidence of Dr. R. Elliott and Mr. W. H. Warwick, head master and secretary respectively of the asylums for the deaf and dumb in the Old Kent-road and at Margate, one of whom says that there were 8 per cent. on 550 pupils, "the offspring of relations"; while the other says that 52 children of first and second cousins have passed through the school since the year 1875, when statistics upon relationship of the parents first began to be collected, but he does not give the total number of children. In the official return supplied by these two institutions there were then 343 pupils, out of whom 22, or 6·4 per cent., were derived from "cousin" marriages. I cannot tell what weight the Commissioners attached to this evidence, but being myself quite unable to reconcile the various statements I obtained through the courtesy of Mr. Warwick the following additional information from Dr. Elliott: "I cannot find the particular notes which I referred to in my evidence before the Commission. I think, however, the 8 per cent. I then mentioned referred to the 350 children then (in 1886) in the institution, to which number reference is twice made just before, and that 550 is a typographical error ..... I have before me a list I drew up from our register some years ago of children elected July 10th, 1876, to (I think) August, 1884, 548 cases." And he gives the following consanguineous cases out of this total:—

Margate and Old Kent-road Asylums.

Relationship of parents.	Number of pupils.	Percentage on 548.
First cousins	25	4·56
Second cousins	3	0·55
"Cousins"...	10	1·82
Grandparents first cousins	2	0·37
"Related"...	1	0·18
Total	41	7·48

He adds: "I have not the particulars here whether they are or are not congenital cases of deafness." Even supposing, however, that all are congenital cases, I cannot find in these figures any suggestion that consanguineous marriage is more productive of deaf-mutism than any other marriages, seeing that the proportion of consanguineous marriages to other marriages must be fully as great as, if not greater than, the 7·5 per cent. here shown.

Another witness, Dr. E. Symes Thompson, says: "45 per cent. of the applicants for admission to Ealing have been the children of first cousins." In the official return to the Commissioners from the Ealing College the total number is given as 18, of which only one is said to be the offspring of cousins. I therefore wrote to Dr. Thompson, and through his kindness obtained the following figures from the lady superintendent concerning the pupils who had passed through the college from 1878 to 1889:—

Ealing Training College.

Relationship of parents.	Number of families represented.	Number of deaf in college.		Number of brothers and sisters not in college.		Total.
		Congenital.	Non-congenital.	Deaf.	Hearing.	
First cousins... ...	3	—	—	—	—	—
Relationship not specified	5	—	—	—	—	—
Total consanguineous	8	7	1	10	5	23
No relationship ...	35	17	18	—	30	65
Total	43	24	19	10	35	88

It will be seen that these statistics labour under the disadvantage of being exceedingly small, and they unfortunately do not tell us the whole number of children born in each family or the number of those outside of the college who were congenitally deaf. But taking the figures as they stand we have:—

——	Relatives.	Non-relatives.
Percentage of families afflicted...	18·6	81·4
Average of children per family	2·89	1·86
Percentage of congenitally deaf in college ...	29·2	70·8
Percentage of all deaf in and outside college	34·0	66·0

Another witness is Mr. Hillyer, the secretary of the British Asylum at Clapton, who makes the statement that "we find most of the deaf-mutes are the children of those who have married cousins." But on turning to the reports of the asylum I find that they give no return on the question of consanguinity, since the parents were either unwilling or unable to give information. In reply to my inquiries Mr. Hillyer wrote that his statement was based very much on the experience of their training master, Mr. D. Murray. The latter gentleman, however, hardly goes so far in his evidence before the Commissioners for he considers the intermarriage of deaf-mutes to be a far more potent cause, nor in his reply to me does he confirm Mr. Hillyer's opinion.

Of the other witnesses who gave evidence, Mr. J. de Castro found that five out of 31, or 16·7 per cent., were the children of first cousins. Mr. W. S. Besant out of a total of 200 children found that two were the offspring of cousins, and one the child of distant relatives, or together 1·5 per cent. Mr. E. Townsend also supplied a table of statistics which I condense for my purpose as follows:—

Inter-marriages among the Deaf-mutes of Birmingham.

Description of marriage.	Number of marriages.	Total number of children.	Average number of children per marriage.	Number of children deaf.
Both parents deaf-mutes ...	16	54	3·37	3
One parent deaf-mute	6	19 or 20.	3·2	2
First cousins, one deaf ...	1	4	4·0	0

Another witness of considerable experience, Mr. A. Welsh, never found a single case in which there was consanguinity of the parents, although he found many cases of the marriage of two deaf-mutes.

In the official returns from 24 institutions in which some record had been kept as to the consanguinity, if any, of the

parents on a total number of 1918 deaf-mute pupils, congenital and non-congenital cases, there were :—

Relationship of the parents.	Deaf-mute offspring.	
	No.	Per cent.
First cousins	43	2·24
Second cousins	17	0·99
First and second cousins	11	0·57
"Cousins"	2	0·1
More distant relatives	26	1·35
Total of consanguineous	101	5·26
Total of non-consanguineous	1817	94·73
Total	1918	100·00

In six of these institutions, comprising 331 cases, there was no case at all of consanguineous origin, but they are all included in the above table.

From nine board schools comprising 198 pupils, from which the Commissioners obtained returns, there were six cases in which the parents were first cousins, or 3 per cent. The Commissioners further give an extract from the report for 1887 of the American Asylum of Hartford, Conn., in which there is a list of all the children admitted during the previous 10 years, together with references to their relatives, of which I have made the following summary :—

Relationship.	Number of families represented.	Congenital deaf-mutes.	Non-congenital deaf-mutes.	Particulars not stated.	Total number of deaf-mutes.	Total number of hearing children.	Total number of children.
Uncle and niece	2	1	1	0	2	6	8
First cousins	8	7	3	6	16	32	48
Second cousins	3	3	1	1	5	12	17
Third cousins	4	2	2	0	4	6	10
"Cousins"	9	3	6	2	11	31	42
Grandparents cousins...	2	2	0	0	2	3	5
Total consanguineous...	28	18	13	9	40	90	130
No relationship	34	38	7	35	80	99	179
Totals	62	56	20	44	120	189	309

This summary forms a very extraordinary table indeed. Out of a total of 56 congenital deaf-mutes 18, or 32·14 per cent., were of consanguineous origin. Put as averages per family we have :—

Relationship.	Congenital deaf-mutes.	Non-congenital deaf-mutes.	Particulars not stated.	Total average of deaf-mutes.	Total average of hearing children.	Average of children per marriage.
Uncle and niece ...	0·5	0·5	0·0	1·0	3·0	4·0
First cousins ...	0·9	0·38	0·75	2·0	4·0	6·0
Second cousins ...	1·0	0·34	0·34	1·7	4·0	5·7
Third cousins ...	0·5	0·5	0·0	1·0	1·5	2·5
"Cousins"	0·34	0·69	0·23	1·2	3·4	4·7
Grandparents cousins	1·0	0·0	0·0	1·0	1·5	2·5
Total consanguineous	0·64	0·46	0·32	1·43	3·21	4·64
No relationship ...	1·12	0·2	1·0	2·35	2·9	5·27

From the above table it appears that the greatest number of congenital deaf-mutes per family will be produced where there is no relationship between the parents, the next greatest number where the grandparents are cousins or are second cousins, while a marriage between an uncle and a niece is less likely to produce many deaf-mutes than any other. In this school it also appears that the non-consanguineous marriages were more prolific than the consanguineous marriages, which is contrary to the most reliable evidence.

At the Illinois Institution, Jacksonville, Ill., out of a total of 1886 pupils from 1075 families, there were 113 belonging to 88 families who were derived from consanguineous marriages as follows :—

Derived from uncle and niece... ...	1 case,	or 0·05	per cent.
,, first cousins	76 ,,	,, 4·00	,,
,, second ,, ...	17 ,,	,, 0·9	,,
,, third ,, ...	9 ,,	,, 0·48	,,
,, fourth ,, ...	9 ,,	,, 0·48	,,
,, grandparents first cousins	1 ,,	,, 0·05	,,

The consanguineous marriages come together to nearly 6 per cent. on the total number of cases; but the principal, Mr. P. G. Gillett, does not state how many of these were congenital. He merely says that of the whole number of 1886 pupils, 490 were congenital deaf-mutes, which is 25·9 per cent. The average number of deaf-mutes per consanguineous marriage is 1·25, and per non-consanguineous marriage, 1·8.

At the Georgia Institution, Cave Spring, Ga., there were returns on 258 cases, which I have tabulated as follows :—

Relationship.	Number of families represented.	Number of deaf children.	Average per family.	Percentage on total of deaf-mutes.
First cousins	20	33	1·65	12·8
Second cousins	11	18	1·65	7·0
Third cousins	4	7	1·75	2·7
Fourth cousins	1	5	5·00	1·9
Half cousins (?)	1	1	1·00	0·38
More distant relatives... ...	3	5	1·7	1·9
Total related	40	69	1·72	26·7
No relationship	45	189	1·3	73·26
Total	85	258	1·4	—

Similarly I have tabulated the return from the New Jersey School, Chambersburg, near Trenton, N.J., as follows :—

Relationship.	Number of families represented.	Number of deaf children.	Average per family.	Percentage on total of deaf-mutes.
First cousins	1	2	2	1·5
Second cousins	1	2	2	1·5
Third cousins	1	1	1	0·8
Total consanguineous... ...	3	5	1·7	3·7
No relationship	34	129	3·5	9·6
Total	37	134	3·6	—

These figures seem hardly to bear out the very decided conclusion of the Royal Commissioners, and fully justify the protest of Mr. van Ofen.

It is lamentable to see all this misdirected work and wasted energy and money, due simply to the refusal of the Government to insert a simple question into the census. It need not be repeated. The expense of the Royal Commission on Deaf-Mutes, &c., would have been saved, the work of countless medical men would be made useful, the public would have their doubts set at rest for ever. Since the year 1851 the Irish Census Commissioners have inquired into the number of deaf-mutes and their parentage, but never yet have they inquired into the relationship, if any, of married persons in that country. The consequence here again is a great waste of money and labour, with results that are no more reliable than those obtained by the Royal Commission,

except in so far as they are on a larger scale. Even then they permit themselves to draw conclusions which on the evidence obtained are untenable, and present their statistics to the public in a form that is misleading. Only in the years 1871 and 1881 are the special relationships returned. I have disentangled them from the non-congenital or adventitious cases and from those where the patients were not both deaf and dumb, with the following result :—

Irish Census Reports.

Relationship.	1871. Number of marriages.	Number of congenital deaf-mutes.	Average per marriage.
First cousins...	62	98	1·58
Second ,, ...	50	89	1·74
Third ,, ...	24	40	1·67
Fourth ,, ...	5	11	2·23
Fifth and sixth cousins ...	12	19	1·58
Total	153	257	1·68
Non-related	2852	3246	1·14
Total	3005	3503	1·17

Relationship.	1881. Number of marriages.	Number of congenital deaf-mutes.	Average per marriage.
First cousins...	74	123	1·66
Second ,, ...	29	46	1·55
Third ,, ...	9	21	2·34
Fourth ,, ...	1	1	1·00
Total	113	191	1·69
Non-related	2474	2972	1·20
Total	2587	3163	1·22

An examination of the above table will show that these statistics, so much relied upon to prove that deaf-mutism is caused by consanguineous marriage, proves nothing of the sort. In 1871, fourth cousins produced a greater proportion of deaf-mutes than any nearer relationship, and first cousins less than any others. In 1881 third cousins produced a greater proportion than any other nearer relationship. Comparing the whole of the reports from 1851 to 1891, though the special relationships are not given, we have the following :—

From the Irish Census Reports.	1891.	1881.	1871.	1861.	1851.	Averages.
Total number of congenital deaf-mutes derived from consanguineous marriages	297	191	257	297	199	248·2
Total number of congenital deaf-mutes derived from non-consanguineous marriages...	2273	2972	3246	3799	3686	3195·2
Average number of congenital deaf-mutes per consanguineous marriage	1·92	1·69	1·68	1·44	1·66	1·68
Average number of congenital deaf-mutes per non-consanguineous marriage	1·27	1·20	1·14	1·14	1·12	1·17
Percentage of congenital deaf-mutes derived from consanguineous marriages	11·56	6·04	7·34	7·25	5·13	7·46

I cannot vouch for the precise accuracy of these figures, as the language of the Census Commissioners is very loose. The figures for 1851 include the cases of persons who were not living in that year; and perhaps the others do also. At all events, as far as this table may be relied upon, we do not see any tendency in consanguinity to produce deaf-mutism in itself, as the Census Commissioners say we should. We do see a slight intensification of a family tendency to deaf-mutism in the half per family greater number of deaf-mutes from cousins up to the sixth degree; and even this difference must be accepted with caution, since in some instances, certainly, the Commissioners have included in their figures all the children born in those families where the parents were related, whether living or not at the time of the inquiry, while there is reason to believe that this has not been done in the case of the non-consanguineous marriages. Even if the figures could be absolutely relied upon, however, as I have already pointed out they would by no means prove that a greater proportion of deaf-mutes are born from consanguineous marriages, though they do indicate that where there is a family taint of deaf-mutism more deaf-mutes are likely to be born in families when there is double inheritance through the relationship of the parents than when this is not the case.

Looking at the percentage of 7·46 deaf-mutes derived from cousins up to the sixth degree it would seem that on the whole these marriages produce less than their due proportion, seeing that in all probability the marriages between cousins so widely related must be more than that percentage of the whole number of marriages in Ireland.

FURTHER OBSERVATIONS ON PERNICIOUS ANÆMIA (SEVEN CASES): A CHRONIC INFECTIVE DISEASE;

ITS RELATION TO INFECTION FROM THE MOUTH AND STOMACH; SUGGESTED SERUM TREATMENT.

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(*Concluded from page 299.*)

VI.—EVIDENCES OF GASTRO-INTESTINAL INFECTION.

Frequency of gastro-intestinal symptoms.—The symptoms of gastro-intestinal disturbance include, I find, not only vomiting and diarrhœa but almost every variety and degree of disturbance—e.g., indigestion, anorexia alternating with ravenous appetite, nausea, sickness, pyrosis, salivation (rare), acidity, retching, vomiting, gastric pain, dilatation of the stomach with splashings, general discomfort over the stomach, looseness of the bowels, diarrhœa, and colicky pains. An analysis of a total of 273 recorded cases which in the light of the foregoing conclusions I have been interested to make shows that the frequency of such symptoms is even greater than supposed.

A Table showing the Frequency of Gastro-intestinal Symptoms in 273 Cases.

Author.	Number of cases.	Number in which gastro-intestinal symptoms are recorded.	Percentage.
Eichhorst (1878) ...	91	74	76
Laache (1883)	11	9	81
Hale White (1890) ...	29	25	86
Byrom Bramwell (1899)	47	40	85
Hunter (cases from the literature of 1890–1899)	88	73	88
Hunter (1900)	7	6	85
Total	273	227	83

NOTE.—I have not included in this analysis the very full and complete record of cases (103 in number) given by Dr. Pye-Smith in his article in 1882, since this includes not only all the earlier cases recorded by Müller and Eichhorst, but also many of those from the records of Guy's Hospital subsequently analysed in Dr. Hale White's list of cases.

The most striking of these symptoms of gastro-intestinal irritation are vomiting and diarrhœa, and their prominence is best brought out by Dr. Hale White's analysis of 29 cases from the records of Guy's Hospital—viz., before admission: vomiting 12 (or 41 per cent.), diarrhœa 10 (34·5 per cent.); after admission: vomiting 16 (or 55 per cent.), diarrhœa 12 (or 41 per cent.). Dr. Cabot's analysis of 50 cases (33 of males and 17 of females)[1]: Nausea and vomiting in 31 cases (62 per cent.), diarrhœa in 12 cases (24 per cent.), constipation in 13 cases, and regular in 13 cases.

Gastric and intestinal lesions. — In the stomach the changes described in individual cases (and these constitute a very considerable proportion of those microscopically examined), I find on detailed analysis of the records of over 150 cases, include every stage of catarrh of the mucosa and its effects—e.g., increase of mucus; swelling of mucosa (Laache, Case 8); punctiform hæmorrhages and submucous hæmorrhages (Eichhorst, Case 4); small-celled infiltration around the follicles with increase of fibrous tissue; fatty changes in the glands, and atrophy of the glands (Fenwick, Nothnagel, Nolen, Hunter, Mader, Weichselbaum, Holt, and Nonne). The usual absence of naked-eye changes of congestion is to me in no way surprising when the extraordinary bloodless condition of the tissues and organs in this condition is borne in mind. I conclude that microscopical examination alone is reliable in determining the presence or absence of lesions.

The changes found in the intestinal mucosa from time to time are, I find, of a closely similar character—hyperæmia, "the mucosa of the intestine, the upper part of the jejunum, the lower part of the ileum, and the whole of the colon œdematous and swollen, with small hæmorrhages on the edges of the villi" (Eichhorst, Case 3).

(Edema; enteritis; erosion; ulcers; and thickening.— "Cæcum œdematous; one or two blackish small spots on the mucous membrane almost diphtheritic-looking" (Hale White, Case 13). "Large intestine; numerous cicatrices of ulcers, or ulcers newly healed, and a little recent diphtheritic inflammatory exudation in parts" (Ibid., Case 3). "Some patches of injection of ileum, and the mucous membrane of the large intestine irregularly injected" (Hale White, Case 20). "Chronic fibrotic changes in the colon with more recent hyperæmia and superficial necrosis" (Morley Fletcher).

VII.—RELATION OF THE GASTRIC INFECTION TO THE ANÆMIA.

It is clear from Case 8 that even during life there may be discoverable direct evidence of infective catarrh of the stomach. It is in connexion with this that the last case (Case 8) has for me such a particular interest, especially when taken in conjunction with Case 1. I had occasion in Case 1 to note the condition of the mouth and tongue and its variations as above described during life. In that case there were no stomach symptoms; but post mortem I found subacute chronic gastritis and atrophy of the gastric glands—a condition of the mucosa of the stomach, in short, identical with the subacute and chronic inflammation with atrophy noted in the tongue during life. In Case 8 there was an identical history as regards the mode of onset, the mouth symptoms (including also salivation), and the subsequent progressive anæmia. Here, however, I had an opportunity to examine the watery fluid without admixture with food brought up from the stomach; and I found evidence of a most intense infective catarrh, chiefly streptococcal—an infection of the stomach causing gastrorrhœa, probably of the same character as the trouble in the mouth which caused the salivation. The condition was clearly infective as was further shown by the effects of treatment. For both the gastrorrhœa and salivation, which had existed for five months, were in the course of a week brought incontinently to an end by the administration of salicylic acid as an antiseptic. Further, the infection thus arrested in activity had obviously some relation to the anæmia. For, following on its arrest, in a fortnight's time the red corpuscles rose from 1,290,000 (25 per cent.) to 2,200,000 (44 per cent.), a difference of 19 per cent.; while the hæmoglobin rose from 24 per cent. to 46 per cent., a difference of 22 per cent. I feel justified, then, in concluding that the infective catarrh in the stomach was not simply a complication resulting from the anæmia (blood-change); but that it really underlay and was responsible for the anæmia, since on removing it by direct antiseptic treatment there was so sudden and remarkable a recovery in the blood itself. In this case I conclude that an intense infection of the gastric mucosa similar to the infection in the mouth underlay the pernicious anæmia; and that the progressive anæmia was not due to the stomatitis or the glossitis, or even to the catarrh of the stomach *per se*, with their attendant disturbances of nutrition, but to the special infection which underlay and was the cause of them all. The stomatitis and the gastritis were the local lesions of an infection, probably of a "mixed" character, chiefly coccal—the progressive anæmia being the result of the destructive action of the poisons absorbed into the blood.

VIII.—ETIOLOGY.

I have now to consider the probable source of the infection pointed to by the preceding observations.

On this point the evidence available is extremely limited, confined as it is to the observations on the seven cases which I have described. For the disease has hitherto been examined and studied *solely* with reference to its relations to the usual causes of anæmia—such as loss of blood, pregnancy and childbirth, wasting discharges (diarrhœa), bad nourishment, and unhealthy surroundings. It is under these headings that its etiology has been discussed and beyond these nothing further has been investigated.

General etiology.—To my own mind no fact stands out more clearly in connexion with the etiology of the disease, than that none of the above conditions can of themselves produce the disease of pernicious anæmia with all its characteristic destructive blood changes. In the first place, I would point out the confusion which exists as to the importance of these so-called "causes." The same conditions—e.g., diarrhœa or vomiting—are arbitrarily regarded as causes or as effects, according to their prominence or to the judgment of the observer. Sometimes they are regarded as both cause and effect. This is well illustrated, I consider, in the grouping adopted by Eichhorst and since generally accepted. Eichhorst grouped his cases (91 in number) etiologically under two headings: 1. "Secondary" pernicious anæmia (67 in number) caused by (1) pregnancy and childbirth, 29; (2) vomiting and diarrhœa, 24; (3) loss of blood and discharges, 7; and (4) unhealthy surroundings, 7. 2. "Primary" pernicious anæmia (24 in number) where no cause was discoverable. The impression which this grouping naturally conveys is that in only 24 out of 91 cases were diarrhœa and vomiting of such a prominence as to excite attention or be regarded as causes. Nevertheless, on examination of the records of the remaining 43 cases of Group 1 assigned to other "causes," I find that either vomiting or diarrhœa, or both, sometimes uncontrollable in degree or other gastro-intestinal disturbances, were prominent features in no fewer than 34 cases—just as prominent, indeed, as the special condition selected to be the "cause." In other words, a total of 58 cases out of 67 (86 per cent.) might have been as reasonably assigned to gastro-intestinal disturbance as to other "causes." And even with regard to the 24 cases of Group 2 which he regarded as "primary," I find digestive troubles, diarrhœa, and vomiting, sometimes very marked in degree, in no fewer than 16 cases (67 per cent.). These facts appear to me to be interesting—not that in my judgment they point to gastro-intestinal disturbance any more than to pregnancy or the other stated conditions as the "cause" of the disease, but that they denote the unsatisfactory character of our present knowledge of the real "etiology" of the disease. When it comes to be a mere question of degree, whether a condition is considered to be a cause or a mere symptom of one and the same disease, it is obvious that knowledge is unsatisfactory. My own conclusion I have already stated—viz., that in all cases these gastro-intestinal disturbances, however slight or however prominent, are of the same character as the blood changes—viz., effects of the disease underlying the anæmia. The whole question of the etiology of the disease, in my judgment, is thus, so far as these above factors are concerned, a completely open one.

The infective nature of the disease: the source of infection.—The facts above recorded appear to me to denote the *infective*, as distinguished from the *general*, nature of the disease. Moreover, they denote the infection to be a *local*, not a *generalised*, one. It is confined to the alimentary tract, its chief seat being the stomach; no part of the alimentary tract from the mouth to the anus, however, being safe from it.

[1] A Study of 50 Cases of Pernicious Anæmia. Boston Medical and Surgical Journal, 1896, pp. 104–107.

Further, in certain of the foregoing cases the first site, or one of the first sites of infection has apparently been the mouth, general discomfort or soreness or tenderness of the mouth having been complained of either before the anæmia declared itself, or "at the same time" as the anæmia. There remains, then, the question whence the infection has sprung in the first instance—from without, or from within the mouth? In this relation the cases divide themselves into two groups—two cases in which there was a most definite history of exposure to sewer gas or drain influences (Cases 1 and 8); five cases in which no such history could on very careful inquiry on the point be traced. This failure to trace any source of outside infection need not necessarily denote that no such infection had occurred; for such failure is common at times with regard to nearly all infective diseases. So clear is the history of exposure in the two cases mentioned, that in the absence of any other facts I should be disposed to regard the others as having possibly arisen in some similar although unrecognised way. But both in these two cases, and in the other five, there was the condition observed of either antecedent or coexisting marked dental cario-necrosis—in most of the cases to such a degree as to amount to "neglect," the teeth being very carious in whole or in part. In the light of what I have described with regard to the infective nature of such dental conditions, and the possible effects on the stomach which may ensue, the question thus raised is whether the "mixed" infection underlying the disease may not have taken origin itself within the mouth in connexion with the teeth. Or, at least, whether the infection may not have found its first footing, so to speak, amidst the infective septic conditions prevailing around the diseased teeth. Either alternative is possible. The subsequent course of the infection is then determined by the relative amount of resistance offered by the mucosa of the mouth and stomach respectively. In the great majority of cases the mucosa of the latter is the first to be affected—in certain cases possibly the only part to be affected. But in certain cases direct infection of the mucosa of the tongue and of the mouth also takes place—if one may judge from the foregoing data (which, however, as I have said, are probably too low) in at least 10 per cent. of cases.

It will remain for future observations on a larger series of cases to determine more precisely the points I have raised—viz., (1) whether dental decay is only important in creating the catarrhal conditions of the mouth and the stomach favourable for the later special infection; or (2) whether the special infection may not, so to speak, be created around them in the first instance; or (3) whether direct infection of the stomach can occur from simple exposure to infection (drain smells) independent of any oral or dental trouble. Whichever may prove to be true, the fact of importance clear to me is, that dental and oral conditions in this disease deserve more attention than any hitherto bestowed upon them. This persistent overlooking of dental conditions I can perhaps best illustrate by my own experience—viz., that while actually interested in conditions of glossitis and stomatitis in cases of pernicious anæmia, it was eight years before I began to note especially the condition of the teeth.

Nature of the infection.—I have throughout spoken of the infection as a "special" one, most probably of a "mixed" character—i.e., brought about by the joint action of two or more organisms. That it is no ordinary one—due, for example, to the ordinary organisms of the mouth or of dental decay—is clear from (1) the rarity of the disease, (2) the remarkably hæmolytic action of its poisons, and (3) the occurrence of an ordinary infective gastritis without any of the blood changes of pernicious anæmia (Case 7). That it is of a "mixed" character appears to me probable from two classes of facts. 1. The abundant presence (as in Case 8) of organisms of coccal and short streptococcal nature, forming zoogloea-like masses amidst the catarrhal and inflammatory exudation contained in the vomit. These organisms were obviously related to the anæmia, the salivation, and the vomiting, since by administration of salicylic acid the first was greatly ameliorated and the two latter were abolished; and yet they are not such as are peculiar to this disease, but resemble cocci present in the stomach in other diseases. Unfortunately to the first (and as it turned out the only) specimen of vomit which I obtained I added formalin to preserve it, so that no bacteriological examination was possible. 2. The disease, though very rare in incidence, is nevertheless common to all classes irrespectively of station, mode of life, food, previous health, or general surroundings. It must remain for future observations to determine the nature of the organisms concerned and their relative rôle.

As it happened, a few days before this paper was sent in I learnt from Professor Adami of Montreal of some interesting and suggestive observations recently made by himself and his fellow-workers, Dr. D Anderson and Dr. Ford, and while this is passing through the press I have received (Jan. 31st) his paper.[2] Their observations may prove of importance in this relation, suggesting as they do that possibly the colon bacillus may be concerned as a secondary factor in the gastric change. They have examined bacteriologically the contents of the stomach in four cases of pernicious anæmia. They found (1) a complete absence of hydrochloric acid, with the presence, however, of considerable quantities of lactic and some butyric acid; (2) an abundant presence of the colon bacillus; (3) in one case a modified form—diplococcoid form—of the colon bacillus within the walls of the stomach; and (4) the presence of the same forms in the liver cells—the bodies giving the iron reaction and constituting, indeed, according to Professor Adami, the granules hitherto regarded as pigment granules. With this last-mentioned conclusion (one, I think, of a debateable character) we are not here specially concerned. The matter, however, is otherwise with the second observation as to the presence of the colon bacillus in the stomach and its possible relation to the disease. On this point Professor Adami is "very careful not to state that the colon bacillus is the primary or the essential cause of (either cirrhosis of the liver or) pernicious anæmia." Indeed, he says that it is "probably not. In either case there is some primary or underlying factor favouring its entrance into the economy." The relation, indeed, is one he describes by the term "sub-infection"—"a condition in which as a consequence of chronic inflammatory disturbance in connexion with the gastro-intestinal tract there may for long periods pass in through the walls of the stomach or of the intestine a greater number of the ordinary bacteria inhabiting the tract, and while the bacteria undergo the normal and inevitable destruction by the cells of the lymph glands, the liver, the kidneys, and other organs, nevertheless the excessive action of these cells and the effect on them of the bacterial toxins liberated in the process of destruction may eventually lead to grave changes in these cells and in the organs of which they are part—changes of a chronic nature." For the action of the bacillus Professor Adami, it will be seen, predicates the existence "in the first place of some chronic inflammatory condition of the mucous membrane of the upper gastro-intestinal tract, leading often to atrophy"—the very condition, in fact, which according to my observations is found, but which I regard as one of the concomitant effects of the special infection underlying the anæmia. It will remain for future observations to determine what are the relative rôles respectively of the colon bacillus infection described by Professor Adami and the coccal and streptococcal infection found by myself in producing the gastritis.

IX.—DEFINITION OF THE DISEASE.

For reasons above indicated I consider the terms "secondary" and "primary" used in connexion with the disease to be no longer fitly applicable. To say that the disease is secondary to diarrhœa is just as correct, in my judgment, as to say that typhoid fever is secondary to the diarrhœa which attends it; for in both diseases the relation of the diarrhœa is the same. Hitherto the feature of the disease to arrest chief attention has naturally been the *anæmia*, the progressive blood change; and all other symptoms have been studied in relation to this. The disease has been regarded as an anæmia complicated from time to time by other disturbances, digestive, nervous, circulatory, &c. The result has been to obscure some of the chief characters of the disease, and certainly to hide much of their proper relation to each other. For the future it will conduce more to throw light on the disease if it be studied as an *infective disease characterised by anæmia* with *definite local and general* effects, than if viewed as an anæmia occasionally complicated with such effects.

[2] On Latent Infection and Sub-infection and on the Etiology of Hæmochromatosis and Pernicious Anæmia. The annual address before the Society of Internal Medicine, Chicago, Nov. 29th, 1899. Journal of the American Medical Association, Dec. 23rd, 1899.

Definition of the disease.—The definition I formulate for the disease is, then, the following. Pernicious anæmia, a chronic infective disease localised to the alimentary tract; *caused by* a definite infection of certain parts of the mucosa of the alimentary tract, chiefly of the stomach, occasionally also of the mouth and of the intestine. It is characterised by (1) intermittent destruction of blood and increasing anæmia (and all the other pathological and clinical changes consecutive to these—e.g., anæmia, lemon colour, urobilinuria, hæmorrhages, dyspnœa, palpitation, œdema), as the result of the absorption of poisons into the blood; (2) periodic disturbance of the alimentary tract, chiefly of the stomach and the intestine, as local effects of the infection on the alimentary canal; and (3) occasional "toxæmic" attacks characterised by fever, sweatings, general nervous symptoms; not infrequently by effects—e.g., numbness, tingling, ataxia, absence of reflexes—denoting deeper nervous changes, such as peripheral neuritis, sclerosis of the cord.

X.—TREATMENT.

The foregoing conclusions suggest certain additional considerations with regard to treatment. In my former paper the indications for treatment I considered to be two—(1) to remove the cause, with the attendant gastro-intestinal conditions favouring its operation; and (2) to combat the individual symptoms. With regard to the first indication it appears to me possible, with additional knowledge gained from the preceding observations, to fulfil this indication much more fully than has hitherto been the case, and that in two directions—first, with regard to the prevention and the removal of the cause, and, secondly, with regard to the conditions favouring its operation.

The prevention and removal of the cause.—The result of the foregoing observations has been to locate this infection underlying the disease definitely to the stomach, and to trace its source either to infection from without, or to the mouth itself.

1. *The hygiene of the teeth and mouth.*—I consider it, then, all-important in all cases of commencing anæmia that special attention should be directed to the condition of the teeth; and that even more than ordinary care should be taken with regard to their health, by removal not only of old stumps, but also of all black teeth and of teeth showing commencing cario-necrosis. Moreover, I consider these precautionary measures necessary, irrespectively of any statements made by the patient as to the degree of discomfort which his teeth are causing. As a matter of fact, in no single case above recorded, however bad I found the teeth to be, was my attention drawn to the teeth by the patient, or was any complaint made of them by him. Discomfort and pain in the teeth are the results of local inflammatory reaction—periostitis and gingivitis; and to a certain extent they denote relatively healthy conditions, inasmuch as they denote that the local tissues still have the power to react more or less actively to irritation. There is a stage, however, in pyogenic conditions, as, indeed, in other forms of infections, when local reaction is absent, or at most insignificant, at the very time when the general septic effects are most marked. The hygiene of the mouth deserves, therefore, in this disease the most scrupulous attention, irrespectively of the statements or opinions of the patient. Absence of local pain and discomfort in the teeth are no criterion, then, in my judgment, of absence of general septic effects (if their condition be recognisably bad).

2. *Local treatment of the stomach.*—As I have shown, whatever may be the source of the infection, its chief seat is invariably the stomach; and the first effect of the infection is an infective catarrh, followed later by deeper-seated changes of the nature of glandular atrophy and gastritis. The indications here are to remove or to combat this catarrh. This may be done either by *washing out the stomach*, as suggested by Sandoz, on the view that many of the symptoms of the disease are due to abnormal fermentation of food products within the stomach; or, still better as I conceive, by *administering local antiseptics* to diminish or to destroy the infection underlying the catarrh. In my former paper I suggested the use of intestinal antiseptics to combat the intestinal condition. The gastric conditions appeared then to be of a too deep-seated character to be affected by such local measures as washing out the stomach; nevertheless, it was one which I conceived might be adopted with advantage in the earlier stages of the disease at least. In the light of the present observations showing the active infective nature of the catarrh, I am more than ever of this view; but the advantages to be got are necessarily limited. We are not likely to remove an infection of the gastric mucosa by washing out the stomach, any more than we can hope to cure a stomatitis or glossitis by rinsing the mouth. In the case (Case 8) in which there was such salivation and gastrorrhœa I had it in mind to try washing out the stomach; but before doing so I determined to try the effect of the other line of treatment—the use of local antiseptics. The result to me was surprising. The antiseptic I used was the one that had proved so successful in Case 7 against ordinary infective gastritis—viz., salicylic acid. I selected this drug on general grounds as the antiseptic which appeared to me at once the most powerful and the least harmful, and the result was eminently satisfactory. Improvement was noticeable on the first day; salivation and sickness ceased from about the fourth or fifth day; and there was a remarkable improvement in the blood condition in two weeks' time as I have described. There are many other antiseptics of the same character which may prove to be equally beneficial. The one which I have been in the habit of using constantly is salicylate of bismuth, and with it also I have hardly ever failed to get some improvement, although never so marked as with salicylic acid.

3. *Local treatment of the intestine.*—In the cases where the symptoms point to intestinal rather than to gastric irritation a similar treatment should be adopted—use of intestinal antiseptics, as I before recommended—e.g., salol, naphthol, calomel, or mercuric chloride (Case 2). In cases where the symptoms point to the colon or the rectum this may be supplemented, as I now recommend, by enemata containing salicylic acid.

4. *Medicinal treatment.*—These measures should not replace but should supplement the use of arsenic as heretofore, the great value of this drug, first used by Dr. Byrom Bramwell, being now fully established.

5. *Serum treatment.*—It is obvious, however, that if once the infection gets firmly rooted in the mucosa, mere local antiseptic treatment—however much it may benefit by diminishing or removing catarrh and thus arresting the disease temporarily—may fail to arrest it permanently, even when aided, as when possible it ought to be, by the use of arsenic. The only indication for treatment, then, is to combat the action of the poison on the blood after its absorption. To this end I propose in future to give a sustained and systematic trial to a serum treatment based on the results above stated. There are few diseases, if, indeed, any disease, in which we have such evidence of a local action on the blood as that which we possess in the case of pernicious anæmia. The chief ill effects of the disease are due to the progressive blood destruction, and its consequent anæmia. If we could eliminate this local action on the blood, or counteract it, the disease as a disease would lose its characters. Its infection would be interesting as a cause of stomatitis, of gastritis, of possibly some form of enteritis, with their attendant symptoms; but it would not cause the anæmia which it now does. I propose, then, to try the effect of systematic serum treatment. The nature of the serum I shall reserve for later investigations accurately to determine. For the present I propose to try the effect of anti-streptococcic serum, inasmuch as my observations point to pyogenic organisms as always at least part agents in the infection. In suggesting this treatment I desire to emphasise that its trial is based, not on any hypothetical considerations as to the nature of the anæmia, but on a series of observations, extending now over 15 years, which slowly, step by step, have served to trace the anæmia back to an infection arising in connexion with the alimentary canal. I have purposely refrained from suggesting such treatment, or from trying it, till I was in possession of facts which appeared to me conclusive as to the infective nature of the disease; and till I had definitely formulated, as I have now done, the grounds of my conclusions.

APPENDIX.—CASES.

CASE 1.—In this case of pernicious anæmia there was a history of "gastritis" six years before. The origin of the illness was referred to an exposure to insanitary conditions, accompanied at the time by irritable sores under the tongue. The teeth were loose and the gums were spongy. Retching and vomiting, which at first prevailed, were subsequently absent. There were well-marked febrile attacks, with perspirations and urobilinuria. The duration of illness was three years. Post mortem there was well-marked chronic

and subacute gastritis.[3] The patient was a man, aged 59 years, who was seen in June, 1888. The health of the patient had previously been good except that in 1883 he was under treatment for a short time for some gastric affection termed "gastritis." (The patient was seen by Sir George Paget.) The present illness dated from 1886. During a holiday he had been exposed for a time to unhealthy sanitary conditions and had suffered at the time from sore-throat and diarrhœa. From that time onward he never regained his former health, but continued to suffer at times from an inflammatory condition of the throat and tongue and gradual failure of strength. Late in 1887 he sought medical advice. In January, 1888, the anæmia was already very marked (red corpuscles 870,000), and at times there were retching and vomiting, especially in the morning; congestion of the throat and certain pale red spots on the tongue were also present. (The patient was seen by Sir T. Lauder Brunton.) He was first seen by me in June, 1888. Considerable recovery had taken place. There was great weakness but no emaciation, profound pallor but no trace of lemon tint or of jaundice. The condition of the tongue troubled him much. There was great tenderness, especially when hot or stimulating food or drinks of any kind were taken. The organ was extremely raw and flabby, deeply indented by the teeth, red and fiery in appearance, with here and there scattered inflamed patches. Its mucosa was smooth as if devoid of papillæ. There was inflammatory redness over the anterior pillars of the fauces. There was no uneasiness or tenderness or other symptoms connected with the stomach itself. The red corpuscles of the blood numbered 3,200,000; hæmoglobin, 56 per cent. The improvement was maintained till August, 1888. Then there was increasing weakness till the patient was confined to bed in December. On March 9th, 1889, he was again seen by me. There was extreme pallor with slight lemon colour but no fever. The pulse was 108, soft and regular. The weakness was very great, the patient being unable even to sit up for any time. The appetite was very poor; there was no desire for food and much discomfort in taking it, especially if the food was hot or stimulating. The gums were very spongy and some of the teeth were loose. The tongue was much the same as before but not quite so raw-looking. It presented a more atrophied appearance; the mucous membrane was smooth and free from papillæ. At the parts over the dorsum and along the edges were patches of more fiery redness, some under the tip of the tongue showing small inflamed vesicles full of serum. The whole tongue was tender and mastication was difficult. In connexion with the stomach there was no acidity or uneasiness after food. The bowels were irregular; at times there was looseness, especially at nights, alternating with constipation. While the former condition weakened him the latter occasioned even more discomfort. He always felt very uneasy when the bowels were not moved daily. Of red corpuscles in the blood there were 1,730,000 (34 per cent.); hæmoglobin 30 per cent. As regards the nervous system there were sleeplessness at night and occasional and somewhat profuse perspirations, especially in the early morning; the latter were usually connected with the looseness of the bowels at such times. The subsequent history of the case was as follows. On March 10th astringent lotions for the mouth were used and a diet of milk and farinaceous food was ordered. Two-minim doses of liquor arsenicalis were ordered in addition to the iron which the patient was already taking. On March 20th there was improvement. The tongue had lost its angry red appearance, it was much paler, the inflamed patches were less marked, and the vesicles had disappeared. From this time onward till the death of the patient on May 22nd the tongue gave him no further trouble, its condition being better than at any time during the previous one and a half years. It always presented a smooth, flabby appearance, but the tenderness on eating had been entirely lost; instead of it being a painful effort to take even bland food he could take all kinds of food and even condiments without the slightest discomfort. The periodic "toxæmic" attacks were without any recognisable exciting cause, and were always marked by certain features. Thus, two days previously to the seizure of March 22nd more lemon tint than usual was noticed and the urine was more highly coloured. On the night of the 21st the patient had been disturbed by perspiration, but feeling better on the morning of the 22nd he took his breakfast as usual. Shortly afterwards he was seized with a feeling of intense weakness and with drowsiness so marked that at the time of my visit he lay as if partially narcotised, answering questions slowly and languidly (his natural disposition was lively and excitable); there was a ghastly lemon hue, the pulse was rapid, the temperature was 99·4° F., and the pupils were contracted. The drowsiness continued till late in the afternoon, gradually passing off. During the night there were several free motions of very dark colour and the urine on the next day was of a remarkably high colour. There occurred similar attacks from time to time—April 13th, 17th, and 24th. On the day following such an attack the patient always expressed himself as relieved, although it always left him much weaker. No ground was regained after the attack on April 24th. Death took place on May 22nd. Post mortem there were characteristic pigment changes in the liver and the kidneys. The walls of the stomach were very thin and wasted, but there was no trace of malignant disease. The lymph glands in the smaller curvature were enlarged, soft, and pinkish, the largest of them being five centimetres in diameter. The stomach was empty, its mucosa was covered with a thin layer of mucus, and it was bile-stained near the pylorus. The mucous membrane was very thin, presenting no obvious morbid change. Microscopically there were well-marked changes in the mucous and submucous coats of the cardiac end, atrophy of the gastric glands, and an increase of fibrous tissue. At others the glands were still seen to be surrounded by foci of granulation tissue. Around these inflammatory foci blood-vessels dilated extending in from the submucosa. The submucous coat was greatly thickened as the result of chronic inflammation, its thickened vessels in parts showing subacute inflammatory changes. There were no inflammatory changes at the pyloric end. In the intestine there was nothing abnormal.

CASE 2.—The origin of illness in this case of pernicious anæmia was referred to the use of a new tooth-plate. Sickness, looseness of the bowels, toxæmic attacks, and nervous symptoms were the presenting conditions. The illness lasted for four and a half years. The patient, a man, aged 42 years, was sent to me by Dr. R. Honeyburne of Idle, Bradford, with the following graphic history of the case. "He began to look paler nearly four years ago and consulted me then. He dates his illness himself from a new set of upper teeth fixed in a gold plate which tarnished and tasted 'like pennies' from the first day he wore them, until by my advice they were removed and a vulcanite plate substituted. In addition to a general feeling of ill-health one of the first symptoms he complained of was a sensation of numbness and tingling in his hands and feet. He became progressively more and more anæmic, lost his knee-jerk, developed hæmic murmurs, vomited his food, and certain of his muscles (deltoids and extensors of the thigh) wasted markedly. There was no wrist drop. By this time his pallor was most marked, his skin having a yellowish tinge; his pulse got quicker and weaker till he lay in bed œdematous nearly all over (on the chest, back, legs, backs of hands, face, &c.); he was delirious, vomiting nearly everything, his blood being pale and on examination containing very few perfectly formed cells and a mass of granular débris—in short, he got so bad that I did not think he could live another week. All this time he had been taking large quantities of iron and latterly arsenic. An addition of one twenty-fourth of a grain of corrosive sublimate was now added to his medicine (five minims of liquor arsenicalis every four hours) and his improvement under it (or at any rate after it) was marvellous. The vomiting stopped, the œdema subsided, and he began to gain colour. In about three months he was quite well again, with the exception of the wasted muscles which still remained stiff and made his gait somewhat awkward. They in about six months more had also recovered except the knee-jerk. At this time looking back on the case I thought it one of lead-poisoning, though Dr. J. E. Eddison of Leeds then leaned to the view that it was a cured case of pernicious anæmia. The patient remained well for two years, then he had an attack of melancholia, which soon passed off, leaving him again quite well (better in health than he had ever felt before, so he says). There was no anæmia. This state of well-being lasted for about six months when small-pox being prevalent I vaccinated him. This occurred last October (1893), and from that date he gradually declined in health until about Christmas, when his anæmia was well marked and he began to take his former medicine—mercuric chloride and arsenic. He immediately improved, and continued to do

[3] rit. Med. Jour., vol. i., 1891.

so until he had an attack which looked like influenza, but may have been one of the febrile attacks common to the disease, since which time he has remained nearly stationary in spite of the medicine he has been taking regularly, with the exception of a short time when we were obliged to remit it because of an attack of arsenic poisoning—scaly eczema on the backs of the wrists and elbows, with marked bronzing of the skin in other parts. I think that is about all I have to tell you concerning his history. If there is anything else you want to know he will be able to give you an intelligent account of it himself. With regard to my theory of lead-poisoning I must say that I was never able to find any possible means of lead ingestion except the doubtful one of the tooth-plate; also, about the vaccination origin of the relapse, it occurred exactly in point of time, but I never heard of such an origin of pernicious anæmia. Still, it is a disease of which we have much to learn." The family history of the patient was good and his own previous health had been good. The present illness dated from four years previously to my seeing him (May, 1894). He had changed his tooth-plate in May and had suffered from acidity and a pricking feeling in the hands; in December he began to get weak. In January, 1891, he had to take to his bed for six weeks, with great weakness, swelling of the hands, sickness, and constipation. He was "unconscious for a week." He woke up suddenly conscious and asked for a glass of beer. He could eat anything and he got well and in June was going about; there was, however, stiffness in the legs and the muscles were wasted. He remained well till early in 1893, when he had business worry, not a great one, but it seemed to "knock all the nerve" out of him. He went away for three weeks and came back better. During that summer (1893) he had never had such good health. His usual weight was 13 st. 6 lb.; it then rose to 13 st. 12 lb., now in May, 1894, it was 11 st. 6 lb. In December, 1893, came the small-pox scare. He got frightened and was vaccinated. Two weeks later he had sickness and he suffered from biliousness. After being three weeks under treatment he again got well, or seemed to do so. In January, 1894, he had a sudden fit of chilliness—a rigor. The temperature was 102° F. The patient, who was ill for two days, got well from this, but he "hung fire" ever since. In May, 1894, he was sallow, lemon-coloured, very weak, and breathless. He complained of numbness and tingling of the legs, and there was marked bronzing of the skin over the back and in patches on the legs. The knee-jerks were absent. He suffered a good deal from sickness, which came on irregularly morning, afternoon, and evening, and was sometimes bilious in character. The bowels had been very free, acting two or three times daily up to a week previously to the time of my seeing him. There was no pain or loss of blood. The red corpuscles in the blood numbered 1,800,000 (36 per cent.) with poikilocytosis; hæmoglobin, 38 per cent. The patient died in December, 1894, after an illness of four and a half years' duration.

CASE 3.—This was a case of pernicious anæmia of indefinite origin. There were febrile attacks, sickness, and biliousness, and the tongue was raw and tender, "like raw beef." The duration of the illness was two years. The patient, who was seen on Oct. 10th, 1895, was sent to me by Mr. Corner of Poplar. His previous health had been good. Two years before (1893) he had suffered from "influenza." A year later (1894) he had had another attack. He did not suffer from indigestion before his first influenzal attack in 1893. After that he constantly complained of a faint and weak-feeling stomach. Since then there had been loss of appetite for both food and drink. From Christmas (1894) to May (1895) there was improvement, when he went back to work, at which he continued till the middle of August. He was still, however, very weak, as he noted as a mark of improvement that he could walk a mile or so. His appetite at this time was fair. On Sept. 7th he was seized with a chill and with shiverings. The temperature was 104° F. On the next day the temperature was normal. He picked up a little and went to business, but grew feebler day by day. He felt sick and fainted at times. On Oct. 10th, 1895, his condition was extremely anæmic, the lemon hue was noticeable, and there was slight conjunctival jaundice. He had lost 1½ st. in weight in the last 12 months. There was sickness occasionally, usually after eating. The stomach was slightly dilated; there was no tenderness but some flatulence. The bowels during the past year had been regular; formerly they were constipated. There was no pain or discomfort in, or loss of blood from, them. The rectum was normal. Between October, 1894, and May, 1895, the tongue was raw and tender "like raw liver," causing him great pain. He had bad teeth, but they caused him very little pain. He was scarcely ever known to have toothache, but now and again he suffered from neuralgia. Latterly he would discover that a tooth was loose and could be drawn out without the slightest force or trouble. He never wore false teeth or a tooth-plate of any kind. The red blood corpuscles numbered 1,860,000 (37 per cent.), with slight poikilocytosis; hæmoglobin, 54 per cent. There were no retinal hæmorrhages. There was a sensation of numbness and tingling in the fingers. The patient died in January, 1896. Mr. Corner reported that "he had acute relapses of fever, with disturbances of liver, &c., and increased failure of heart." From when I saw him up to the time of his death he suffered from sickness and vomiting. During the last month or two of his illness the faint and weak feeling in his stomach he described as agony.

CASE 4.—In this case of pernicious anæmia there were nervous symptoms, the teeth were all decayed and black, and there was diarrhœa but no sickness. The illness lasted for two and a half years. The patient was a man, aged 56 years, whom I saw with Dr. Aldren Turner on Jan. 24th, 1896. There was a history of increasing weakness with intermittent periods of betterment for the previous two and a half years, the weakness specially marked during the last three months. The patient had come under Dr. Turner's care on account of nervous symptoms, ataxia, numbness and paræsthesia, and loss of knee-jerks, but there was no loss of flesh. He had formerly been a very active, athletic man. When seen he was slightly built and appeared to be very anæmic and slightly lemon-coloured. The tongue was soft, clean, moist, and not indented. The teeth were very bad, all decayed; they formed a lot of black decayed fangs and crowns. The stomach was dilated and there were splashing sounds; the abdomen generally was flatulently distended and full. Flatulence was present but there was no sickness. The bowels were loose, acting five or six times daily, and the stools were very offensive. There was no malignant disease in the rectum. The blood was exceedingly pale; the red corpuscles, which numbered 760,000 (15 per cent.), were small and misshapen and there was much granular débris; hæmoglobin, 18 per cent. Systolic bruits were heard in the heart. There was some œdema of the ankles. The pulse was 84, of fair strength, and regular (the patient had been taking digitalis). He was extremely excitable, talking almost incessantly, and was very difficult to manage. The colour of the urine was normal; there was no albumin. The spleen was not enlarged. By way of treatment as much milk as possible was given, five grains of salicylate of bismuth with five grains of salol were administered every four hours, five minims of liquor arsenicalis thrice daily, and calomel at night for three nights. On Feb. 3rd (ten days later) I learnt that he had been better since my former visit, but had been very weak for the last two days, with weak, intermittent, and irregular pulse. He had been very excitable, seeing visitors, altering his will, and constantly talking. He had become hoarse. His colour was better and his fingers were warmer. The abdomen was much less distended and was soft; there was no splashing. In that respect the patient had felt much better. The tongue was clean and moist. The bowels were still loose and had acted three times during the night; the stools were no longer offensive and they were not so coloured (they were black before but now they were of the colour of the yolk of an egg). The pulse was 84, soft, and regular. The blood showed notable difference in colour. Red corpuscles, 1,250,000 (25 per cent.); hæmoglobin 40 per cent.; there was no granular débris. The hoarseness formed the prelude to an attack of bronchitis from which the patient died a week later.

CASE 5.—This was a case of pernicious anæmia of ill-defined origin. There was hæmorrhoidal loss of blood but there were no gastric symptoms. The teeth were necrosed. The duration of the illness was two years and eight months. In company with Dr. Rowland Coombs of Bedford I saw the patient, a man, aged 51 years, on Feb. 8th, 1896. He was a healthy man who had never suffered from any severe illness till the present one. There had been increasing weakness for the last 12 months, especially for the last four months, and for the last week he had been confined to bed. He was very pale, with slight lemon colour of the skin and slight conjunctival jaundice. He had never suffered from indigestion, sickness, or vomiting, and was free from them now. At most there was only a slight

degree of flatulence. The tongue was clean, but not especially smooth, and there was nothing abnormal. There were two or three exceedingly bad, black, rotten stumps of teeth in the lower jaw. The bowels were regular and there was no diarrhœa. The weakness was greatest, almost to faintness, when the bowels were moved. He had suffered a little from piles, which used to bleed, two or three years previously but not at this time. There was no trace of malignant diseases in the rectum. The abdomen appeared somewhat full and there was considerable distension of the colon, especially of the transverse colon, but nothing abnormal was felt. In the liver and spleen the dulness was normal. In the heart loud bruits were heard. The urine was dark; an urobilin band could be detected. In the blood the hæmocytes numbered 1,230,000 (24 per cent.), with poikilocytosis; leucocytes, 4000 (1·307); hæmoglobin, 40 per cent. On May 8th, 1896, the following note was made by Dr. Coombs: "I think him much better. Looks better. His anæmia and breathlessness on exertion much improved. He still complains of rectal trouble, due wholly, I think, to hæmorrhoids. After a time I intend to propose to excise them, as the little loss of blood he suffers may be ill afforded in his case." A later note stated: "He has taken on a part of his work again and apparently without hurt." The patient died in December, 1897.

CASE 6.—This was a case of pernicious anæmia in which there was a history of chronic indigestion, very bad teeth, and diarrhœa. The illness lasted for nine months. The patient, a man, aged 52 years, was seen by Dr. A. H. W. Clemow of South Kensington and myself on Jan. 31st, 1898. He had suffered from anæmia six months previously and after getting better had experienced a relapse three weeks before we saw him. He had always been healthy but had suffered from indigestion, poor appetite, and a "bad cook." He was thin, spare, very anæmic, and of a light lemon tint. The tongue was clean but flabby. The teeth were very bad, all covered with tartar and sordes. Of three of the upper molars only the roots were left and one of these was loose and could be pulled out with the finger. Digestion was very feeble. The bowels were loose irregularly, and the breath was bad. The abdomen was sunken; there were no pains or tumour in the epigastrium. In the liver and spleen the dulness was normal. The urine was dark in colour with urates but no albumin. The red corpuscles in the blood numbered 1,390,000 (27 per cent.); hæmoglobin, 34 per cent.; there was poikilocytosis; there was no increase of leucocytes but an increase of granular material. The patient died on Feb. 12th, 1898. The following note was made by Dr. Clemow: "In the earlier attack of anæmia I find he had no sickness, but there was irregularity of the bowels with diarrhœa at times. When I first saw him his temperature was raised about a degree and pulse rapid, 112. Under iron these symptoms gradually subsided, but I had made a diagnosis of probable pernicious anæmia. During the last week of his illness everything he took into the stomach caused considerable pain."

CASE 8.—This was a case of pernicious anæmia in which the origin of the illness was referred to exposure to sewer-gas. The teeth were decayed and there were sores in the mouth. Intense gastrorrhœa was present with sickness and vomiting. Microscopical examination of the vomit pointed to intense mycotic catarrh. Dr. Aldren Turner and I saw the patient, a man aged 53 years, on April 21st, 1899. He had been well till June, 1898, when for several weeks he was much exposed to sewer-gas during his occupation as a builder. It appeared that close to the window of an office where he worked there was a cesspool the smell from which was so bad that it often made him sick. He had lost flesh, but not much. By October he was too ill to work and was noticed to be very pale; he suffered from retching, vomiting, and pain after food. This continued. His complaint was thought to be cancer. He saw a physician, who put him upon a milk diet for a week or ten days and then on ordinary diet, but there was no improvement. When the patient was seen by Dr. Turner on April 11th, 1899, the chief symptoms were constant retching with salivation and flow of watery mucus from the mouth and periodical daily vomiting of still large quantities. The red corpuscles in the blood numbered 1,600,000 (32 per cent.); hæmoglobin, 28 per cent. No malignant disease was discoverable in the stomach or in the rectum. On April 21st the patient was very anæmic and he presented the lemon-coloured appearance. The pulse was 90 and the temperature remained steadily between 99° and 100°. There were hæmic murmurs. The red corpuscles numbered 1,290,000 (25 per cent.) with marked poikilocytosis; hæmoglobin 24 per cent. There were constant salivation and the bringing up of large quantities of watery mucus (pints daily), and during the periodical sickness of the patient still larger quantities were vomited. The stomach was dilated, but there was no splashing. The patient suffered from no pain, but from time to time he experienced a feeling of great discomfort with nausea which was relieved by vomiting large quantities of mucus, after which he felt easier and was usually hungry. Meats disagreed with him and gave him pain. The upper teeth were absent, except one in front which was dark, decayed, and loose in the socket. Several molars and bicuspids were absent in the lower jaw. The patient had worn tooth-plates for the last two years; previously the teeth had been in a bad condition. When the illness began in June, 1898, he had some sort of painful sores in the mouth under the tongue which were not connected with the teeth. His own description was that his illness seemed somehow or other connected with this—"it seemed to spread right down into the stomach and right through him." The liver and spleen dulness was normal. The specimen of the vomit which was obtained for microscopical examination was fluid with rusty flakes. There was alkaline reaction. The flakes were found to consist of mucus with catarrhal cells in great number, the whole being loaded with cocci, both within the catarrhal cells and in zoogloea-like masses. No yeast fungi were found to exist. A diagnosis of pernicious anæmia with subacute infective catarrh of the stomach ("mycotic catarrh") was made. The treatment consisted of the administration of from three to four pints of peptonised milk daily, liq. bismuthi sedativa (Schacht) with salicylic acid (three grains) thrice daily, mustard leaves over the stomach at night, and two grains of calomel at night. On April 28th Dr. Turner reported: "Under new treatment (commenced on Friday) improvement noticeable on Monday; since then steady and marked. Amount of fluid brought up much diminished; no vomiting since Tuesday; patient has lost sense of discomfort about stomach he has had for months; likes the milk. Improvement in colour very marked. Blood: red corpuscles, 1,600,000 (32 per cent.); hæmoglobin 40 per cent." On May 5th the patient was again seen by me. There was very marked improvement. All of the stomach symptoms had gone and there was no further expectoration or vomiting, but I was unable to get any stomach material for another examination. In the blood the red corpuscles numbered 2,200,000 (44 per cent.); hæmoglobin, 46 per cent. The patient left for home three days later. The subsequent history of the case, for which I am indebted to the medical attendant (Mr. R. C. Kirkby), was as follows: "The vomiting and constipation improved steadily after he returned home, but the blood condition fluctuated, the highest count being about 3,000,000 red corpuscles. He developed acute epididymitis and orchitis in September while I was away for my holiday. This was followed by cystitis and albuminuria, the albumin being in excess of the amount attributable to pus. Œdema of the feet and legs followed and congestion of the bases of the lungs. The urine became clearer during the administration of urotropine, but the patient had some attacks of syncope and gradually faded out on Dec. 3rd, 1899. The vomiting recurred three or four times after he returned home, but the intervals between the attacks increased and the matter vomited latterly was merely bile-stained milk. Salivation occurred when he had stomatitis. The latter was always a bother. The mouth was always clammy and uncomfortable. Diarrhœa occurred several times during the illness, the bowels being opened four or five times in the 24 hours, but usually the motions were formed, sometimes scybalous and coated with mucus; occasionally there were streaks of blood."

Harley-street, W.

BRISTOL DRAINAGE SCHEME.—Last week a poll was taken of the owners and ratepayers of Bristol on the proposal to promote a Main Drainage Bill, and by a majority of over 10,000 the proposal was rejected.

BARNSTAPLE AND NORTH DEVON DISPENSARY.—The sixty-eighth annual meeting of this institution was held on Feb. 1st. The report showed an increase in the number of patients treated. The financial statement showed that the funded stock was now £5768.

PROGNOSIS IN APPENDICITIS, WITH AN ILLUSTRATIVE SERIES OF 200 CASES.[1]

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DURING the last few years so much has been written and spoken about disease of the appendix that one hesitates to contribute another paper on such a well-worn theme. The subject of prognosis, more particularly the basis of prognosis in individual cases, is, however, by no means threshed out, and my object will be attained if the points now raised induce discussion as to the relative value of the available data. The discussion of questions of treatment is intentionally avoided, but a consideration of prognostic indications will serve indirectly to emphasise the essential importance of regarding "appendicitis" not as a defined entity, but as a group of conditions ranging from acute perforative appendicitis at one extreme to a mild perityphlitis at the other, and of recognising that careful differentiation is the only sure foundation of rational treatment—treatment based on the actual conditions present and not on routine lines—surgical or medical.

Any acute attack of appendicitis involves more or less immediate risk to life during the attack, and there is the well-known liability to recurrence at a subsequent period, so that the subject of prognosis may be considered in two sections: (1) prognosis as to recovery from the attack, and (2) prognosis as to subsequent recurrence.

I.—PROGNOSIS AS TO RECOVERY.

General statistics are in the case of affections of the appendix more than usually untrustworthy and are entirely valueless unless the survey is sufficiently wide to include all the forms of appendicitis, and unless care is taken to distinguish clearly between case-mortality and attack-mortality. The importance of including every type of case, mild or severe, is brought out in the series of 200 consecutive cases treated in the medical and surgical wards of St. Mary's Hospital which are here adduced to illustrate certain points. I desire to express my indebtedness to my colleagues, Dr. W. B. Cheadle, Dr. D. B. Lees, Dr. S. Phillips, Mr. E. Owen, Mr. H. W. Page, Mr. A. J. Pepper, Mr. A. Q. Silcock, Mr. J. E. Lane, and Mr. H. S. Collier for permission to include in the series cases under their care, many of which I have had opportunities of examining from this point of view. It must be clearly understood that any statistics here given are intended solely to illustrate certain points and are not to be regarded as in themselves a basis for deduction.

Ninety-eight cases were treated throughout in the medical wards with three deaths, and 102 were treated in the surgical wards with 22 deaths, a certain proportion of the surgical cases having been transferred from the medical side. The low mortality of the medical series is attributable to the large proportion of cases of simple perityphlitis (appendicitis with local non-suppurative peritonitis), just as the higher mortality of the surgical series is due to the large proportion of cases with general peritonitis which was present in 20 out of 25 fatal cases. When the two sets are grouped together we have a more representative series showing an aggregate mortality of 25 in 200 cases, or 12½ per cent.—a figure which bears a general correspondence with the 14 per cent. given by Mr. F. Treves as an approximate average for hospital cases. It is certain that hospital statistics give an exaggerated idea of the tendency to a fatal termination for the reason that many of the milder cases are not sent to hospitals, while the more severe forms with general peritonitis gravitate there, as the hospital surgeon who is called upon to operate on practically hopeless "too late" cases knows so well. Mr. Treves considers that if a large series, including both hospital and private cases, were taken together the mortality would be nearer 5 per cent. than 10 per cent.

Of much greater importance, however, than percentage mortality in the aggregate is the rate of mortality in the several types—a point emphasised by Dr. H. P. Hawkins in his instructive series of 264 cases from the records of St. Thomas's Hospital. The necessity for careful differentiation lies at the very root of accurate diagnosis and therefore of prognosis; and any classification, if it is to illustrate these points, must be based upon the relationship between the lesion of the appendix and any resulting peritoneal or other infection, and not upon the pathological features of the lesion of the appendix by itself. In the following table the cases are grouped into five classes.

Class.	—	Recovered.	Died.
1	Simple appendicitis and perityphlitis	99	
2	Appendicitis with localised suppuration (operation in 27 cases)	29	
3	Appendicitis with diffuse peritonitis (operation in 17 cases)	3	20
4	Chronic and relapsing appendicitis (operation in 37 cases)	42	—
5	Appendicitis with special complications	2	3
		175	25
		200	

Class 1, simple appendicitis and perityphlitis, comprises a minority of cases in which the inflammation is almost or entirely limited to the walls of the appendix and a larger number of cases in which, as the result of the appendicitis, there is simple perityphlitis—i.e., localised non-suppurative peritonitis of an adhesive type.

Class 2 consists of cases in which the appendicitis has resulted in localised suppuration, usually intra-peritoneal, sometimes retro-peritoneal.

Class 3 comprises all cases of appendicitis resulting in diffuse as distinct from localised peritoneal infection. The term "diffuse peritonitis" is employed rather than "general peritonitis," because not rarely the peritonitis is limited, or nearly limited, to the lower half of the abdominal cavity.

Class 4 is made up of chronic and relapsing forms. Any case in which three or more attacks occurred is included in this class. The individual attacks of relapsing cases resemble those of Class 1, but from the pathological and prognostic standpoints they have definite differential features.

Class 5 is a small and diminishing group consisting of cases in which the chief danger arises from complications other than those directly connected with peritonitis or local abscess—e.g., intestinal obstruction, fæcal fistula, suppurative pylephlebitis with portal or general pyæmia, hepatic or subphrenic abscess, thrombosis of the iliac vein, pleurisy and pneumonia, parotitis, or secondary hæmorrhage.

In the 200 cases of my series there were two of acute intestinal obstruction, three of fæcal fistula (all of which did well), two of hepatic abscess, one of subphrenic abscess, one of parotitis, one of acute pulmonary œdema after operation, and one of pneumonia; but only those in which the special complications influenced their course are included in Class 5.

With these general observations we may now pass on to the consideration of the principles of prognosis in an individual case. Prognosis must ultimately depend upon the precise nature of the lesion, which, in fact, constitutes the pathological basis of prognosis. Corresponding with the morbid processes we have various clinical manifestations, and the latter, in so far as they afford indications of what is actually taking place, constitute the clinical basis of prognosis.

THE PATHOLOGICAL BASIS OF PROGNOSIS.

There are two essential factors in the pathological basis of prognosis: 1. The nature and course of the lesion of the appendix regarded from the point of view of relative infectivity. 2. The extent and nature of any resulting peritoneal infection which depends for the most part on the actual condition of the appendix and in part also upon its position and relations and upon any special modifying conditions such as the presence of old adhesions. The most important direct prognostic factor is the peritoneal, and it may therefore be considered first.

1. *The extent and nature of the peritoneal infection*.—It is well known that, given a case of appendicitis, the danger to life in a very large measure hinges upon the extent and nature of the peritoneal involvement or liability to involvement. In the large majority of instances when the disease is fatal the cause of death is diffuse infection of the

[1] A paper read before a meeting of the Medical Society of London on Nov. 27th, 1899.

peritoneum resulting in septic peritonitis. Thus, in 20 out of 25 fatal cases in my series there was diffuse peritonitis, frequently associated with local collections of pus in the vicinity of the appendix. It will be noticed that in the present series of cases the mortality in those with diffuse peritonitis was approximately 87 per cent. Many of these patients were in a practically hopeless condition when they were admitted. Some no doubt might have been saved by early operation. It will not be appreciably beside the mark if we conclude that where there is diffuse peritonitis the mortality will range between 80 per cent. and 90 per cent.—a conclusion which forces into prominence the necessity for attempting to anticipate by early operation such widespread infection.

Next to diffuse septic peritonitis, and putting aside such rare and fatal complications as suppurative pylephlebitis or hepatic abscess, the most formidable condition is local suppuration. It is, however, in connexion with this group of cases that the modern treatment of appendicitis has produced the most conspicuous benefit. For example, in my series, out of 31 cases with strictly localised suppuration 29 recovered, and it so happened both of the fatal cases were obscure cases with secondary abscess of the liver, and in one with general pyæmia also. In two out of the 31 cases the abscess ruptured into the bowel and was thus evacuated. Turning to Class 1 we see that when the lesion is of a strictly localised and non-infective type the prognosis, so far as immediate risk to life is concerned, is highly favourable—in this series and in Dr. Hawkins's series uniformly so. Whilst, however, the immediate risk to life from a localised adhesive peritonitis is very slight there are dangers of a more remote kind. Adhesions may persist leading to intestinal obstruction, which was the cause of death in two of the cases in Class 5, or permanent structural changes may be started in the appendix which sooner or later give rise to recurrent attacks—usually, it is true, only slight attacks, but occasionally, owing to the supervention of intense infective inflammation, of a grave type. Of Class 4, composed of chronic and relapsing cases, it is only necessary to point out that the individual attacks were for the most part of a mild type and that of 38 cases in which the appendix was removed all the patients recovered except one, who was an elderly man suffering from chronic appendicitis. He died three days after the operation from acute pulmonary œdema. This case is included in Class 5 Such facts as these are sufficient to illustrate that so far as immediate risk to life is concerned one chief factor is the extent and nature of the peritoneal infection, whether localised or diffuse, suppurative or non-suppurative, of mild or severe degree of virulence.

2. *The nature and course of the appendix lesion.*—From the point of view of prognosis we may divide appendix lesions into severe forms and mild forms on the basis of relative infectivity. Some forms of appendicitis may be regarded as mildly infective, others as severely infective, the distinction depending in part upon gross anatomical changes and in part upon the virulence of the infective organisms contained therein. As to the latter we have no certain data available for purposes of prognosis; on the other hand, it is comparatively easy to gauge the relative severity of the anatomical lesions of the appendix. Severe lesions of the appendix are: (1) perforation, whether from concretion, ulceration or gangrene; (2) gangrene (whether from interference with blood-supply or from intense infective inflammation); and (3) ulceration, due to specific infections—e.g., tuberculosis, typhoid fever, dysentery, or actinomycosis, the presence of concretions, or the result of intense inflammation. Perforation, gangrene, and ulceration are those which possess in the greatest degree the property of infectivity, but to these we must add two others; (4) concretion; and (5) suppuration within the appendix itself, which, though they may exist for a long time without causing trouble, are potentially severe lesions. These severe lesions produce a relatively intense infection so that the outcome is in the most grave cases diffuse septic peritonitis, and in the less grave but still severe cases local suppuration. For example, of 18 cases of diffuse peritonitis 12 cases were associated with perforation and six cases with gangrene, both perforation and gangrene being in many instances secondary to concretion, and 10 out of 31 cases of local abscess were proved to be due to perforation or gangrene; in many of the remainder there was strong reason to suspect perforation. Mild lesions of the appendix are: (1) "simple" inflammation (catarrhal, or more correctly "parietal," appendicitis), acute or chronic; (2) stenosis or obliteration of the lumen, which is frequently associated with (3) cystic dilatation of distal portion; (4) concretion without ulceration; (5) superficial ulceration; and (6) kinking, adhesion, volvulus, or hypertrophy of mucosa, any of which may occlude the lumen. This group, while it consists of lesions which are comparatively mild from the point of view of acute peritoneal infection, comprises most of those which are responsible for chronic and relapsing cases. Of 24 cases of my series in which the appendix was excised in the interval between the attacks and its condition carefully noted, in nine cases the walls were greatly thickened, in seven cases there was stenosis or obliteration of the lumen with cystic dilatation of the distal end in five out of the seven, in six cases extensive adhesion with or without kinking, and two cases only was a concretion present. It is noteworthy that in most of these cases the lesion was such as directly or indirectly to encroach upon the normal lumen of the appendix.

THE CLINICAL BASIS OF PROGNOSIS.

The uncertain and often treacherous course of appendicitis, with the insidious development of grave complications, is a matter of common knowledge. Much stress has been laid on the impossibility of ascertaining early in an attack whether resolution or suppuration will be the outcome, but on pathological grounds it is clear that from the prognostic standpoint this is not the most important point. The important questions in the first instance are, will the peritoneal infection be localised or diffuse? Is it a mild attack, or is it one of the grave forms of appendicitis with which we have to do? To determine prognostic indications we must proceed on the same lines as we do in order to ascertain diagnostic indications, and in their characters and relative significance taken as a whole we have the basis of prognosis. There is no single indication which may not mislead, but the sum of all the indications will not usually do so. These may be conveniently grouped under four headings: (1) local symptoms, (2) general symptoms, (3) local signs, and (4) the progress of the case.

1. *Local symptoms.*—(*a*) Pain is one of the most constant of symptoms, and though we may have intense pain in what develops into a mild case, and only slight pain in a case of gangrenous appendicitis which proves rapidly fatal, it is none the less true that the distribution, severity, and character of the pain are of much significance. It is, of course, common for the initial pain to be referred to the umbilical region or elsewhere rather than to the region of the appendix, but in mild cases it tends to become localised in the right iliac fossa, whereas in perforative cases the pain is usually more sudden, more severe, and more generalised. It is when pain is associated with definite collapse that it assumes its maximum importance and suggests perforation, rupture of adhesions, or rapidly spreading peritoneal infection, and we must not be misled by an interval of apparent quiescence following the onset of the acute pain. In some cases we have two distinct phases of pain—a preliminary dull aching pain or slight colicky paroxysms for a day or two and then a sudden increase in severity, the more acute pain being usually accompanied by vomiting and general disturbance. Such preliminary pain may coincide with the development of local inflammation of the appendix itself (the pre-peritoneal stage), the more severe pain with the onset of acute inflammation around the appendix (the stage of appendicular peritonitis), or again an increase of pain may be the result of spreading peritonitis, or may be attributable to the rupture of an encysted abscess. In any case a sudden increase of pain should attract anxious consideration and may be an urgent indication for immediate operation. The duration of severe pain is also of much significance, since in the majority of mild cases it soon tends to become more localised and less intense. Persistent severe pain, e.g., pain so severe as to render necessary the continuous administration of morphia or opium, generally means a severe lesion; and if the pain in addition to being persistent and severe radiates to the left iliac region or upwards, it is suggestive of spreading peritonitis. Persistent severe pain which is strictly limited to the region of the appendix is, I think, especially apt to accompany concretion. Pain which is materially increased by deep respiration is suggestive of considerable local peritonitis, and the same may be said of marked pain or difficulty on micturition. No one who has carefully compared the duration, character, and course of pain in the mild attacks of relapsing appendicitis with what

occurs in the acute perforative cases can question its significance, though it must be clearly understood that the converse of this is not necessarily true since there may be a very severe lesion without much pain, particularly with gangrene of the appendix. (*b*) Vomiting, if present, usually accompanies or follows the pain, sometimes it precedes it. It is not uncommonly absent in the mildest forms and in the majority of average cases it is an initial symptom only and ceases when the patient is kept absolutely at rest in bed and carefully dieted. If vomiting is frequent and severe, and especially if it is persistent, it is a valuable indication of a severe lesion and the same holds good of vomiting which recurs after a period of comparative repose. Of 93 cases of my series in which this symptom was carefully inquired into; in 64 cases it was present at or soon after the onset and then ceased, and of these 59 recurred and five died; in seven cases vomiting was persistent and severe, and of these seven five died; and in 29 vomiting was not noted and all of them recovered. Occasionally the character of the vomit may be significant—e.g., stercoraceous or coffee-grounds vomit, both of serious import. Although as a positive indication the presence of vomiting is important its absence proves nothing—e.g., in gangrenous cases with general peritonitis it may not be present at all, but such exceptional occurrences do not detract from its general significance—a significance which I think is rather under-estimated. Constipation, not uncommonly preceded by diarrhœa, is so usual in all types that in itself it is not of any differential import, but other things being equal a natural action of the bowels and ability to expel flatus are favourable. Hiccough, especially if persistent, is unfavourable.

2. *General symptoms.*—To help us in determining how far the local lesion is affecting the organism as a whole we have two reliable guides (*a*) the temperature, pulse, and respiration, considered conjointly not separately—a point upon which I would lay very great stress; and (*b*) the aspect and general condition of the patient with especial reference to collapse, or anything approaching it, restlessness, or general distress. (*a*) Temperature. It is generally recognised that taken by itself the temperature chart in appendicitis is apt to be a fallacious guide; if, however, it be considered in conjunction with the frequency and characters of the pulse and the frequency and type of respiration we are not likely to be seriously misled. Appendicitis is typically a febrile affection, but there are at least four conditions in which the temperature may be normal or subnormal: (1) the initial collapse of acute perforative or gangrenous appendicitis; (2) fully developed septic peritonitis; (3) local suppuration, the abscess being strictly circumscribed; and (4) mild appendicitis without appreciable local peritonitis. Subject to such exceptions as these the range, type, and duration of the pyrexia have special significance. High fever of a continued type during the first two or three days generally means a severely infective lesion, but it does not tell us whether the infective process will be local or diffuse, and at times fever of this kind accompanies cases which undergo rapid resolution. A fall of temperature, if accompanied by a fall in the pulse frequency and by improvement in the general condition, is usually reassuring, but not otherwise. A secondary rise of temperature after the first few days has a very definite meaning—spreading peritonitis, suppuration, or some intercurrent complication—whilst fever persisting after eight or 10 days generally means local abscess, in which case, if allowed to continue, it will usually assume a more intermittent or remittent type. The pulse is, on the whole, of more prognostic value than the temperature provided that its characters as well as its frequency, are carefully noted, that relative rather than absolute frequency is relied on, and that a careful distinction is drawn between a persistent and a merely temporary alteration. A high pulse-rate suggests a severe lesion and in particular diffuse peritoneal infection, the more emphatically so if the pulse frequency is disproportionate to the temperature. I find that in the large majority of the less severe cases included in this series the pulse-rate was between 80 and 100; in every one in which it was persistently above 120 the attack was a severe one, and in most of them terminated in local suppuration or general peritonitis. It is true that in two or three cases when *in extremis* from general peritonitis the pulse-rate was not above 100 and in one it was below that point, but this is only what may occur in the later stages of any infective disease and does not detract from the general significance of a high pulse-rate. The suggestion, which by some recent writers is treated as almost axiomatic, that a pulse-rate of 120 is an indication for operation, has much evidence to support it, but we must not forget that to wait for any such development may be to let slip the best time for operating in an acute case. Frequency and type of respiration are chiefly of importance in correcting an erroneous inference from a low temperature and pulse-rate in what may actually be a desperate condition, frequent shallow respirations of the costal type constituting under such circumstances a warning of grave peritoneal implication. (*b*) Aspect and general condition.—The importance of the pinched and anxious aspect, of restlessness, obvious distress, or collapse, are too well known to require detailed reference. Speaking generally in appendicitis such symptoms mean acute peritoneal shock or general peritonitis. The initial collapse which at times marks the onset of perforative appendicitis may be so transient that shortly afterwards the patient's general state gives no idea of the gravity of the case, but the fact of its having occurred is none the less significant. Occasionally in the most rapidly fatal cases there may be more or less persistent collapse, and the development of any such symptoms in the course of a case is naturally of the worst possible omen. Of the third group of prognostic indications it is only possible to speak very briefly.

3. *Local signs.*—The condition of the abdomen as ascertained by careful physical examination. (*a*) Impaired mobility during respiration, local or general, and distension, local or general, may go together, but in appendix cases the former is more reliable that the latter. It is quite exceptional for there to be no impairment of movement during respiration, whereas obvious distension is frequently absent throughout. Local immobility, with or without slight fulness, is the rule in cases of appendicitis with localised peritonitis. General immobility, with one important exception, points to the onset of diffuse peritonitis. The exception is diaphragmatic immobility, which appears to be due to simple reflex inhibition. This may be met with in any case in which the initial pain is very severe; it is usually transient and passes away when the pain is relieved by sedatives. With this exception we may regard the extent and degree of impairment of movement as one of the most reliable data in estimating the amount of peritoneal implication, and therefore one of our most valuable prognostic indications. (*b*) Local tenderness.—The area of local tenderness affords some guidance as to the extent of the local inflammation, provided always that the patient's sensibility is not dulled by opium or by collapse. When there is little or no circumjacent peritonitis the tenderness may be strictly limited to the region of the appendix, e.g., in chronic appendicitis and in the early stages of acute appendicitis. In most cases of perityphlitis with considerable local peritonitis there is a considerable area of tenderness in the right iliac region with its maximum intensity over the appendix, whilst in the more severe forms with widespread peritonitis we find marked tenderness in the left iliac fossa and possibly over the whole abdomen, and in some of the gravest cases there is some general abdominal tenderness but no special local tenderness in the appendix region. As one other instance, persistent or increasing local tenderness may be almost the only sign of localised suppuration within or near the appendix—a condition the prognostic significance of which is obvious. (*c*) Muscular rigidity corresponds more or less closely with cutaneous hyperæsthesia and tenderness, so that in relation to prognosis the two would be noted together. (*d*) Local tumour or deep-seated resistance is very common, but as it is frequently absent in severe cases with diffuse peritonitis and often not discernible at first its prognostic value is very limited. It is important to bear in mind, contrary to what was believed in the old days when perityphlitis was held to be due to fæcal accumulation, that the absence of any tumour or swelling in the right iliac fossa not only does not contra-indicate the existence of perityphlitis, but may be of serious prognostic significance in relation to it as being suggestive of the absence of the local peritonitic barrier, which so often shuts off the infected area from the general peritoneum. On the whole we are justified in saying that given appendicitis a definite local tumour is reassuring. What has been said as to the significance of local tumour would, with slight modification, apply to dulness on percussion.

4. *Progress of the case.*—In many instances when first seen the condition has so far developed as to provide definite data for prognosis; if, however, the case is seen early this

may not be so. Under such circumstances the development of events in the ensuing 24 hours, 36 hours, or 48 hours may furnish the needed indications for prognosis and treatment. In the milder cases symptoms will tend to recede or at least to become more localised. On the other hand, if the affection be of a severe type the symptoms will persist or become intensified, though sometimes only after a treacherous remission which may very readily mislead.

II.—PROGNOSIS AS TO RECURRENCE.

Statistics vary as to the frequency of recurrence: some authorities place it as high as 47 per cent., others at below 30 per cent.; in my series it was 31 per cent. It may, then, be expected in about one-third of the cases. We also know that the tendency to recurrence usually manifests itself within two years, and most commonly within one year, of the first attack. Besides such general facts to guide us the following clinical features will aid in forming an opinion as to the likelihood of recurrence in any particular case. 1. The nature of the first attack.—If there were local suppuration the probability of recurrence is relatively slight; on the other hand, a mild first attack is frequently followed by recurrence. 2. Convalescence from the first attack.—If the condition clear up but slowly and local pain, local tenderness, or slight swelling persist for some time the probability of relapse sooner or later is very great. 3. Condition in the interval between attacks.—If there is occasional pain or discomfort with irregularity of the bowels and definite local tenderness or resistance a chronic appendicitis probably exists. The palpation of the enlarged and thickened appendix will render the latter diagnosis certain, which means a chronic tendency to relapse so long as the appendix is allowed to remain there.

Upper Berkeley-street, W.

A NEW AND MORE PERMANENT METHOD OF MOUNTING AMYLOID SECTIONS, STAINED WITH IODINE.

BY ALAN B. GREEN, M.A., M.B., B.C. CANTAB.

THE following process of mounting amyloid sections stained with iodine gives more permanent results than any other method which I have met with. Some sections stained and mounted in this way have, after seven weeks, apparently not deteriorated in the least; no change can be distinguished. Whether the method is permanent in its results time alone can show, but I hope that this will prove to be the case. The following solutions are required:—(*a*) Weigert's iodine. (*b*) Pure liquid paraffin (30 cubic centimetres) and iodine crystals (one gramme). The purest liquid paraffin used for lamps is the best for this purpose. (*c*) Xylol (30 cubic centimetres) and iodine crystals (one gramme).

First place on a coverslip a small quantity of pure white vaseline ready for immediate use for mounting the stained section. Float the section from water on to a glass slide and drain and blot away as much water as possible.

From a drop-bottle pour a few drops of solution (*a*) on the section until it is sufficiently deeply stained. Then drain away excess of solution and from a second drop-bottle pour a fine stream of solution (*b*) over the section. This dehydrates the section without removing any iodine from it. Now drain away excess of solution (*b*) and remove the last traces of it by pouring over the section from a third drop-bottle a stream of solution (*c*). Finally, drain away excess and blot quickly to remove the remaining solution (*c*). Then at once place the coverslip with the vaseline on it in position over the section. The coverslip may afterwards be ringed.

Pathological Laboratory, Cambridge.

SHEPTON MALLET DISTRICT HOSPITAL. — The annual meeting of this institution was held on Jan. 27th under the presidency of Sir R. H. Paget. The medical report showed that 132 in-patients had been treated, against 124 in 1898. There were also 116 out-patients and 55 casualties treated, both being in excess of the preceding year. The financial statement showed an increase under all heads and the balance was satisfactory.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A SUCCESSFUL CASE OF ENTERECTOMY FOR GANGRENOUS HERNIA.

BY ARTHUR H. BURGESS, M.B., M.SC. VICT., F.R.C.S. ENG.,
RESIDENT SURGICAL OFFICER, MANCHESTER ROYAL INFIRMARY.

A BOY, aged 15 years, was admitted to the Manchester Royal Infirmary on Dec. 13th, 1899, with a strangulated inguinal hernia on the right side, the symptoms of strangulation having existed for four days. Taxis had been attempted by a medical man but had failed. On admission his general condition was found to be extremely grave, all the chief signs of acute intestinal obstruction being present. There was a small tense swelling in the right inguinal region without any impulse on coughing, the skin over which presented a dusky red appearance and pitted slightly on pressure. Under chloroform the sac was opened and about one ounce of a feculent fluid escaped. A knuckle of small intestine about two and a half inches in length was found tightly strangulated and in a gangrenous condition, a perforation of the size of a threepenny-piece at the summit of the loop having allowed the intestinal contents to escape into the sac. On dividing the constriction at the neck of the sac and drawing down the coil a second but smaller perforation was found in the entering limb of the loop opposite the constriction. The wound was enlarged upwards, the coil was drawn out of the abdomen as far as possible, clamps were applied on either side, and about four inches of intestine, including the gangrenous piece, were incised along with a V-shaped portion of the mesentery. The divided ends of the gut were then united by direct suture, the mucous membrane being first joined by a continuous suture of the finest silk, then the sero-muscular coats by a continuous Lembert's suture, lastly the divided mesentery also by a continuous suture. The gut was reduced, the sac was isolated and ligatured near its neck and cut away, a radical cure being afterwards rapidly performed by Mr. Joseph Collier's method. The wound was closed except at the lower angle in which a gauze drain was inserted. The patient made an uninterrupted recovery without an unfavourable symptom, the temperature of 99° F. on the second night being the highest recorded. The bowels acted slightly two hours after operation, again six hours later, and again 13 hours later. Only warm water was allowed for 36 hours, then warm tea, and milk and soda-water. Benger's food was given on the twelfth day and then a gradual return to ordinary diet was permitted. The wound healed without suppuration and all the sutures were removed on the fourteenth day. The patient was allowed up at the end of three weeks, and was sent to a convalescent home at the end of five weeks. For permission to report the foregoing case I am indebted to Mr. F. A. Southam for whom I was acting at the time.

Bowdon, Cheshire.

A CASE OF COMPLETE INVERTIO AND PROLAPSUS UTERI.

BY F. L. POCHIN, M.B., C.M. EDIN.

ON the evening of Dec. 27th, 1899, I was called to a primipara, aged 20 years. The midwife who sent for me stated that one child was born but that there was another child, dead, which she was unable to deliver. On examining the patient I found a firm fleshy pyriform mass of a dark claret colour and of about the size of the fœtal head projecting from the vulva. To the exact apex of this mass about one-fifth of the maternal surface of the placenta was still adherent. On digital examination per vaginam the finger passed at once into a cul-de-sac formed by the stretched and inverted vaginal walls. No uterus could be felt through the abdominal wall. The tumour did not harden on

taxis. Despite the fact that hæmorrhage had not been excessive the patient was very much collapsed. The face was cadaverous, the lips were bloodless, the pulse was rapid and hardly perceptible, the breathing was quick and shallow, and the extremities were cold. Having detached the placenta and bathed the uterus well with hot boiled water I returned the mass without any difficulty by squeezing it well with both hands and at the same time exerting steady upward pressure in the pelvic axis, following up the uterus with my closed fist until its normal position was reached and the inversion was quite rectified. I then administered sterilised ergot and brandy subcutaneously and slowly injected a quart of hot saline solution per rectum. The patient was also surrounded with hot bottles. Under this treatment her condition quickly improved, the pulse became markedly stronger, perspiration broke out on the skin, and the extremities became warm, while the patient expressed her relief. The puerperium was comparatively uneventful. The lochia became slightly offensive and the temperature rose to 101° F. on the second day, but an intra-uterine injection of one-half per cent. of lysol solution put all right again.

This accident is an extremely rare one. It only occurred once in 190,800 deliveries at the Rotunda Hospital, Dublin (Playfair). In the clinic of Braun and Spaeth no complete case was observed in 250,000 births (Lusk). The case mortality is about 42 per cent. (Crosse). The condition has been ascribed to traction on the cord either by the midwife or as a result of the funis being twisted round the child's neck. Insertion of the placenta exactly at the fundus is considered to predispose to the accident. In this case the patient had been intensely anæmic for a long time before delivery, there had been "some trouble with the afterbirth," and the midwife had "pulled the cord a little." The cord was not twisted round the child's neck.

Fakenham, Norfolk.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL FOR SICK CHILDREN, PLAISTOW, E.

A CASE OF DIPHTHERIA OF THE VULVA.

(Under the care of Dr. E. E. WARE.)

THE diagnosis of diphtheria is always much facilitated by the identification of the bacillus and when also paralysis supervenes the diagnosis is certain. It is a little remarkable in this case that although the diphtheritic patch was situated on the vulva the muscles first paralysed were those of the palate, but the same combination has been noticed before. The explanation is probably to be found in the fact that even slight paresis of the palate muscles would be noticeable long before the same amount of weakness in the leg muscles would become evident. For a similar reason strabismus is often a very early sign of diphtheria. The local antiseptic treatment of diphtheritic patches on external parts of the body is always advisable, though when the palate is affected the harm which the child suffers from fear and struggling probably outweighs the benefit which might result from the antiseptics. The antiseptic employed, however, should not be very strong, otherwise the damage to the tissues may weaken their power of resistance. For the notes of the case we are indebted to Mr. W. W. Farnfield, late resident medical officer.

A girl, aged four years, was admitted into St. Mary's Hospital for Sick Children, Plaistow, E., on Jan. 26th, 1899, with the following symptoms. During the five days preceding admission the patient had suffered great pain on passing urine, the act sometimes taking a quarter of an hour owing to frequent involuntary stoppages. She had not seemed to be as well as usual, she had lost her appetite and had been listless. She had had no previous illness. The patient was a well-nourished child. The temperature on admission was 100° F., the pulse was 120, and the respirations were 28. On examination of the vulva there was seen to be undue redness of the parts which were evidently very tender. The urine was acid; its specific gravity was 1015 and it contained no albumin, pus, or blood. The act of micturition was very painful, the patient screaming while passing urine, but the pain did not continue after the act.

On Jan. 29th the A.C.E. mixture was administered and the bladder was examined both with the sound and bimanually, the forefinger of the right hand in the rectum and the left hand on the abdomen, but the result was negative. It was then noticed that two circular white patches were present on the vulva, one on the vestibule and the other on the right nympha, each being about one-eighth of an inch in diameter; they were considered to resemble diphtheritic membrane, and accordingly a blood-serum tube was inoculated. There was no affection of the throat or eyes. As typical Klebs-Löffler bacilli in pure culture were present on the blood-serum the patient on Jan. 30th was injected with 2000 units of anti-diphtheritic serum. On Feb. 1st the membrane had disappeared and the redness of the vulva was less marked; there was very little pain on micturition. The temperature was 98° and the pulse was 120. On the 8th micturition was quite painless and the vulva was perfectly normal in appearance, but the patient was still very listless. On the 19th the temperature rose to 102·8° and the pulse was 150, and the child vomited. A hypodermic injection of three minims of liquor strychninæ hydrochloridi was given. Nasal regurgitation of fluids on drinking was noticed. By the 21st her general condition had improved. The nasal regurgitation occurred only occasionally. The temperature was 99° and the pulse was 120. From this time recovery was uninterrupted and on Feb. 25th fluid no longer regurgitated through the nose. On March 11th the patient was sent to the convalescent home at Southend.

Remarks by Mr. FARNFIELD.—There is no doubt that this was a case of true diphtheria of the vulva, for even had there been no bacteriological examination the onset of paralysis of the soft palate may be taken as sufficient proof. The symptoms were misleading and pointed to the probability of stone in the bladder, this being the commonest cause of severe pain on micturition in a child, and it was thought that the local redness was due to handling in consequence of reflex irritation. I am indebted to Dr. Ware for permission to publish this case.

SUSSEX COUNTY HOSPITAL.

A CASE OF INTERSCAPULO-THORACIC AMPUTATION.

(Under the care of Mr. T. J. VERRALL.)

AMPUTATION of the whole upper extremity with removal of the scapula and part of the clavicle (or as it is often called "interscapulo-thoracic amputation") has been specially described by Paul Berger.[1] The chief dangers of the operation are hæmorrhage and shock. Hæmorrhage is in great part controlled by the preliminary ligature of the subclavian artery and vein, but this does not affect the hæmorrhage from the supra-scapular and posterior scapular vessels. This is the most thorough operation which can be performed for malignant disease of the upper part of the humerus and recurrence does not occur in a very fair proportion of the cases. Of 43 cases in which interscapulo-thoracic amputation was performed 34 patients recovered from the operation; in 10 of these the ultimate result was uncertain. In 14 of the remainder recurrence occurred; in 11 of the 14 the recurrence appeared within 12 months of the operation.[2]

A married woman, aged 39 years, was admitted into the Sussex County Hospital on March 21st, 1898. Five months previously she noticed that the upper part of the left arm would show swelling which persisted for a day or two and then disappeared. There was always some pain in the arm, especially on movement, which was not so free as was natural. For two months work had been impossible, but it was only three weeks since the swelling took a definite shape and

[1] L Amputation du membre supérieur dans la contiguité du tronc, 1887.
[2] Jacobson's Operations of Surgery, second edition, p. 157.

became persistent. Though she ate well she had grown much thinner of late. There was a fusiform swelling of the upper third of the humerus spreading into the axilla and back on to the scapula. All the shoulder muscles were wasted and she could only move the arm about three inches from her side. The pain was severe, especially at night. The skin over the humerus was moveable, but there were several large veins. There were no enlarged glands to be felt. Before the time of the operation it became evident that the bone had snapped high up near the joint.

On April 1st the upper extremity was removed according to the plan of Paul Berger. Previously to commencing the real operation an incision was made into the tumour. This, which showed an extensive malignant growth, was unnecessary for diagnosis, but the patient had been promised that the arm should not be sacrificed till the examination of the tumour had been made. As much blood was lost from this incision as from the rest of the operation. It was also to be deprecated on account of the risk of infecting sound parts. After removing the middle third of the clavicle and cutting through the subclavius no difficulty was found in securing first the subclavian artery and then the vein, each between two ligatures. Skin flaps, pectoro-axillary and cervico-scapular, were made, the arteries were caught as they were divided, and there was no bleeding of consequence till the division of muscles attached to the posterior border of the scapula. The wound was drained with one tube. The operation was very well borne. The long wound healed by primary union, with the exception of one and a half inches at the centre, where there was a superficial slough of the flap edge. This part was not quite healed when the patient left the hospital on the seventeenth day. She, however, was walking about and feeling well. Examination of the limb showed that the whole upper part of the humerus was affected and apparently the shoulder joint, although the scapula was healthy so far as naked-eye evidence went. The growth under the microscope was seen to be sarcoma containing abundant small round cells and some spindle cells. No large myeloid cells were discovered.

The patient has been under observation up to the present time (Feb. 1st). There is as yet no sign of recurrence. She complained, especially at first, of pain in the site of the cut ends of the brachial plexus; exalgine and quinine have controlled this. Her general health is good and she has recovered weight.

Remarks by Mr. VERRALL.—In a contribution to the *Annals of Surgery* this month Russell Fowler insists that this operation should be done in all cases of malignant disease of the humerus, however located, whether in the upper extremity, shaft, or lower extremity of the bone. In my case I selected it partly from the grave suspicion that the scapula was diseased, also for the fear lest with a less operation it would be impossible to get sufficient flaps wide of the tumour. Doubtless the control of hæmorrhage is the first point to consider. If the tumour actually encroach on the subclavian region I can imagine great difficulty in securing the main vessels; but here there would be but little prospect of permanent cure, even if the immediate result was good. In my case the vessels were found and ligatured without delay and no large amount of blood was lost, although the cut into the tumour oozed until the limb was removed. The extreme rapidity of recovery in this case was very striking, so also was the immediate improvement in the general condition of the patient. With regard to the question of recurrence I have delayed reporting till a considerable time had elapsed and I could fairly hope the cure was permanent. Although I cannot feel sure, even after 22 months, that this is effected, I may fairly hope it is. Of the 72 cases tabulated by Fowler in the paper above alluded to eight died from the operation, others recurred at various dates, in others no further report was given, and only 14 were well at the time when reported, as much as one year or more after the operation.

ROCHDALE INFIRMARY.

A CASE OF INTESTINAL OBSTRUCTION ARISING FROM MECKEL'S DIVERTICULUM.

(Under the care of Mr. R. B. SELLERS.)

THE extremity of a Meckel's diverticulum may remain adherent to the umbilicus or it may form a fresh adhesion elsewhere, especially to the mesentary. In either case it may give rise to intestinal obstruction, and the same result may also be due to the diverticulum even when it is unattached. Considering that this vestige is found in 2 per cent. of all the bodies examined[1] it is somewhat strange that it does not give rise to symptoms more frequently. The symptoms of obstruction are usually rather acute, and the diagnosis can only be made after a laparotomy. For the notes of the case we are indebted to Dr. T. Hillhouse Livingstone, house surgeon.

A man, aged 32 years, was admitted into the Rochdale Infirmary in a more or less collapsed condition. There was a history of five days' duration of abdominal pain chiefly referred to the epigastric region, together with nausea, vomiting, and intense thirst. The bowels were obstinately constipated and glycerine enemata were ineffectual and had been for two days before admission, and at the same time no flatus had been passed. The patient had not been feeling well for some weeks beforehand and apparently the more acute symptoms which supervened were an exacerbation of the old complaint. The pulse was wiry in character and 120 to the minute; the temperature shortly after admission was 101·4°F. On account of the collapsed condition very few subjective symptoms could be elicited, but it appears that colic was the first symptom, followed shortly afterwards by vomiting and later by distension of the abdomen. Shortly after admission the vomiting became fæcal in character and the man was covered with a cold clammy sweat. His tongue was very dirty with a white fur at its edges and a dirty brown strip down its centre. No intestinal peristalsis was visible. The intense thirst was relieved by giving the patient ice to suck. No fluid could be made out in the peritoneal cavity and the rectal examination revealed nothing; neither was there any evidence of external hernia. In case of intussusception being present a long rubber tube was passed up the rectum and warm boric lotion was injected, but no improvement resulted. Everything pointed to operative treatment to relieve the obstruction.

The abdomen was accordingly opened in the linea alba by an incision reaching from the umbilicus to three inches above the pubes, the bladder having previously been emptied by a catheter. The peritoneum was opened and a band was found adherent to the umbilicus. On closer examination it was found to have a lumen with a closed extremity at the umbilicus; the other end was attached to the small intestine and a coil of small intestine was tied down and strangled by the diverticulum, the serous coat being ulcerated. It was impossible to separate the apex of the diverticulum from the umbilicus, and therefore it was divided after a ligature had been applied to the distal end. The proximal end was secured by forceps and was afterwards excised near to the mother gut by raising a cuff of peritoneal and muscular coats and ligaturing the mucous coat, after which the two outer layers were inverted by means of a Lembert's suture of fine catgut. The abdomen was stitched up and the patient was put to bed with the foot of the bed raised and plenty of hot bottles. Unfortunately, the patient had not been admitted soon enough; fæcal vomiting came on again and he became delirious and in spite of stimulants he died 12 hours after the operation.

Necropsy.—Permission to make a post-mortem examination was obtained and on opening the abdominal cavity peritonitis was seen to be almost universal. There was no perforation and the Lembert's sutures were efficient. The diverticulum branched off from the small intestine about three feet above the ileo-cæcal valve and must have been about four or five inches long. The appendix was found to be abnormally long, so long that it reached across to the left iliac fossa and was at first mistaken for a second diverticulum.

Remarks by Dr. LIVINGSTONE.—In this case the malformation caused by the non-obliteration of the omphalo-mesenteric duct running between the blastodermic vesicle and the intestine in fœtal life coincided in its position with the position recorded in other cases, for it was a short distance above the ileo-cæcal valve at right angles to the ileum. Its situation in this case—opposite the mesenteric attachment—is, I think, also fairly constant. From the evidence at the post-mortem examination death was attributed to peritonitis which had existed before admission.

[1] Treves's Intestinal Obstruction, 1899, p. 42.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Part played by Insects in the Spread of Malaria.—Experimental Production of Amyloid Disease in Animals.—Neutralisation of Cobra Venom by its Antitoxin.—Cortical Changes in Acute Chorea.—Nervous Disturbances of Respiration, Mastication, and Deglutition and the Movements of the Larynx.

A MEETING of this society was held on Feb. 6th, in the Pathological Laboratory of University College, Mr. A. PEARCE GOULD, Vice-President, being in the chair.

Mr. A. PEARCE GOULD referred in suitable terms to the recent death of Dr. Charlewood Turner. He also announced that the council had appointed himself, as the senior surgical vice-president, to act as president during the absence of Mr. Watson Cheyne in South Africa.

Dr. GEORGE H. T. NUTTALL demonstrated a number of Microscopic Lantern-projections which had been lent him by Dr. Ross and other observers illustrating recent investigations into the Part played by Insects in the Spread of Infective Diseases, especially Malaria. The specimens illustrated in a very graphic manner the gradual growth of the parasite within the body of the mosquito, how the capsulated organism burst, and the sporozoites became liberated into the body-cavity of the mosquito. These then became deposited in the salivary glands of the insect, by which means they became imported into a fresh host, there to undergo a development like their parents. These specimens referred to the proteosoma, which was the malarial parasite of birds. Specimens of the filaria perstans were also exhibited. By means of his observations on this insect Dr. P. Manson had been lead to conclude that the mosquito was the chief agent in the spread of malaria. Specimens showing the parasite of quartan ague and the tertian parasite in the stomach of the anopheles were also exhibited.

Mr. STRANGEWAYS PIGG (for Dr. Alan B. Green) communicated the results of an inquiry into the Experimental production of Amyloid Disease in Animals. The animals used were rabbits and chickens. Healthy rabbits and chickens were used, and the micro-organism employed was staphylococcus pyogenes aureus. One cubic centimetre of a broth culture (24 hours' incubation) was injected either subcutaneously, intravenously, or peritoneally in rabbits and into the pectoral muscle of the fowls. The dose was gradually increased as toleration was established. Only two out of the 20 rabbits experimented on ultimately survived. Of the two fowls one succumbed on the fifteenth day after the first injection. Some of the rabbits lived for three, four, and five months. The tissues were hardened with a 5 per cent. formalin solution, as alcohol and other hardening reagents undoubtedly affected the reaction for amyloid materials. In the rabbits no definite amylaceous changes could be identified, though in some of the tissues a pinkish colouration was obtained. Sections of the organs of the fowl were stained distinctly pink with methyl violet and gave the characteristic mahogany brown stain with iodine. Sections of the organs of the rabbits showed what Dr. Green believed to be probably a hyaline degenerative change. They gave a pink colour with methyl violet, but this faded when mounted in Farrant's medium, glycerine, or salt solution and the whole section became blue. The rabbit, sections of which were under the microscope, had lived several months under the injections, during which time it lost weight. The hen, sections of which were shown, succumbed on the fifteenth day after the first injection. During this time it had seven injections and went down slightly in weight. Post mortem Dr. Green discovered no signs of amyloid disease macroscopically in any animal. Fragments of the spleen of the hen kept for six weeks in 5 per cent. formalin showed rather less vivid pink colouration when stained with methyl violet than those fragments hardened for only 24 hours. Frozen sections were cut to avoid passing the tissues through a series of alcohols for the same reason. He was preparing, however, some paraffin sections. In every case sections of the rabbits' organs showed only what he thought to be most probably hyaline degeneration changes. Generally the hyaline material stained bright pink with methyl violet, but when mounted in Farrant's solution, glycerine, or salt solution the pink faded entirely in a few days or hours, leaving the whole of the section blue. The pink also faded when the section was placed in a 1 per cent. hydrochloric acid bath. The only way he had been able to keep the pink colour permanently in the sections was after staining—by dehydrating sections with pure liquid paraffin such as was used for lamps, washing in xylol, and mounting in vaseline. When stained with iodine these sections showed the degenerated parts only slightly darker than the normal parts. In the sections of organs of the hen he had obtained entirely different results from those obtained in the rabbit. The appearance in the case of the hen was that of true amyloid degeneration. Stained with methyl violet the red colour did not fade in Farrant's solution; or glycerine sections might be stained deeply with methyl violet, or excess of stain removed in a 1 per cent. HCl bath without causing the pink colour to fade. Stained with iodine the degenerated parts took a deep mahogany-brown stain. The specimens, which were exhibited in an adjacent room, he need not describe.

Dr. W. MYERS gave an account of his investigations into the Neutralisation of Cobra Venom by its Antitoxin, made with a view of throwing some light on the nature and composition of the venom of the cobra. The venom contained two distinct kinds of toxin, one a hæmolytic and the other a nerve toxin. If the venom of the cobra were gradually heated the hæmolytic toxin was destroyed before the nerve toxin. In a concentrated form the cobra venom was constant and retained its strength, but in a dilute form (say, 1 per cent.) its toxic power diminished by keeping. Dr. Myers's investigations had been made with Calmette's antitoxin and to explain the results obtained it was necessary to assume the existence of a "toxoid" substance; and in general terms hypotheses similar to those enunciated by Ehrlich explained the results obtained.

Dr. BERTRAM ABRAHAMS read a paper on the Cortical Changes in Acute Chorea. He showed a series of lantern slides and microscopic specimens illustrating the changes in the parietal cortex of a woman, aged 28 years, who died on the thirty-seventh day from an attack of chorea gravidarum. The choreic movements were at first confined to the left side, the right being unaffected till shortly before death. There was fairly constant but moderate pyrexia throughout the illness. The cortex of the left hemisphere was very little altered, there being only a moderate exudation of leucocytes and a slight increase in size of the peri-neuronal lymph spaces. The condition was evidently a very early stage of that seen on the right side. Here Meynert's columns were obliterated by a profuse exudation of small cells, which appropriate staining proved to be uninuclear leucocytes. These were shown in the act of exuding from the smaller blood-vessels. The peri-vascular and peri-neuronal lymph-spaces were much dilated and the cortex generally was distinctly œdematous. The pyramidal cells were seen to be considerably altered in appearance. They were frequently bulged laterally and many of them had their processes broken off. The nuclei were often swollen and pale but the nucleoli stained with unusual distinctness. The Nissl bodies, on the other hand, were seldom well-marked and the pigment was much diminished in amount. In the enlarged spaces around the cells a large number of the uninuclear leucocytes were shown to have accumulated. The changes were on the whole similar, though in less degree, to those described by Dr. F. W. Mott in cases of status epilepticus and, as in them, the alterations in the cells appeared to depend upon modifications in the chemical condition of their lymph environment. It was obvious, moreover, that their nature and extent were perfectly compatible with complete recovery. With regard to the general question of the pathology of chorea the appearances tended to support the view that the inflammatory changes in the cortex were not due to local causes but arose secondarily to toxic alterations in the blood.

Mr. W. G. SPENCER and Dr. RISIEN RUSSELL demonstrated some experiments bearing on the Nervous Disturbances of Respiration, Mastication, and Deglutition and the Movements of the Larynx.

HARVEIAN SOCIETY OF LONDON.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Feb. 1st, the President, Dr. W. H. LAMB, being in the chair.

Mr. D'ARCY POWER showed a case of Inward Displacement

of the Lower Epiphysis of the Humerus and illustrated it with skiagrams. The patient was a girl, aged six years, who fell upon her left arm in September, 1899. It was impossible to obtain details of the accident, which happened in Cornwall, but the arm had been kept in splints for six weeks. She was admitted to the Victoria Hospital for Children on Jan. 1st, 1900, on account of a deformity of the elbow. The arm was in a state of cubitus varus—that is to say, the long axis was directed inwards at the elbow, but there was neither shortening nor wasting. The movements of flexion, extension, pronation, and supination were unaffected, and the patient only complained of a little pain over the projecting external condyle. Mr. D'Arcy Power had hesitated, therefore, to perform any operation, thinking that if he did so the last state of the arm might possibly be much worse than the first. The skiagram showed that it would be quite easy to chisel away the projecting angle of the shaft of the humerus. He thought, however, that it would be better to do this when the developmental processes at the elbow were completed. Mr. D'Arcy Power pointed out that the case belonged to a very obscure class of injuries to the elbow the exact nature of which is only now becoming known by the application of the Roentgen rays. The skiagram showed that the separation of the lower epiphysis of the humerus had been subperiosteal and had resulted in a shifting of the whole epiphysis towards the inner side. The displacement had led to the external condyle of the humerus losing its cartilaginous covering, whilst the cavity of the olecranon had its long axis oblique instead of vertical. The epiphysis appeared to be fixed in its new position by ossification of the periosteum which had probably been injured at the time of the accident and by an increased width of the internal condyle which served to support the epiphysis in its new position.

Mr. JACKSON CLARKE demonstrated the method which he employed for supporting the spine in caries of the cervical and upper dorsal regions, as applied to a patient, aged eight years, in whom the disease was situated about the fifth and sixth dorsal vertebræ. The patient had been treated as an out-patient for over a year and she had gained in general health and the local spinal trouble had improved greatly in that time. The support used was a form of Chance's splint furnished with an occipital horseshoe-shaped piece to which was added a chin-strap. The principle of antero-posterior support in spinal cases was approved by the late Sir John Erichsen in the shape of Taylor's splint introduced in 1870. Mr. Clarke found that Chance's splint, which was introduced in 1850, was simpler and in some ways better than the other. After a long and careful comparison with the various forms of corsets he had no hesitation in deciding in favour of the method of antero-posterior support.—In answer to Mr. DOUGLAS DREW Mr. CLARKE said that he based his judgment upon extensive clinical experience.

Dr. A. WHITFIELD showed a boy, aged 16 years, suffering from Acne Vulgaris combined with marked Seborrhœic Eczema. The patient was in the grocery trade and worked very late hours in hot rooms, but he stated that his general health had never suffered in any way. For about three years he had suffered from acne of the face, and for about a year he had noticed that his head had become very scurfy and that red spots occasionally came out on his chest. During the last month the condition of the head and chest had become much more marked and red spots had come out on his back and face. On examination Dr. Whitfield was struck by the presence of enormous numbers of comedones on the face, especially on the forehead and cheeks. Most of these were large and prominent, but few only were much inflamed, pustulation being present only in slight degree. The skin of the face was noticeably greasy, a condition which might partly be accounted for by insufficient washing, but was undoubtedly more than a mere accumulation. The whole of the scalp was covered with a very thick greasy scale, which extended downwards in a gyrate manner on to the left side of the forehead. Where the rash reached the forehead it was seen to be of a florid red colour with very defined outline and covered with a yellowish scale. On the chest and back a considerable number of comedones could be seen without any inflammatory areola around them, and in addition to these there was a number of discoid patches varying in size from that of a small lentil to that of a sixpenny-piece. These patches could be traced from single follicular papules, and when they had extended centrifugally they became bright red hyperæmic spots without infiltration, but covered with an adherent and rather greasy scale. The condition thus strongly simulated psoriasis at the edge of the hairy margin of the scalp, and on the chest and back. There were, however, no other lesions on the elbows or knees, and the facts that the disease was associated with a general, seborrhœic condition of the skin and that these psoriasis-like spots took origin from small follicular papules would seem to justify the diagnosis of seborrhœic eczema. Dr. Whitfield alluded to the fact that some observers were inclined to identify seborrhœic eczema with psoriasis, as the same disease, and said that he himself believed them to be distinct, and that, while admitting that the differential diagnosis was occasionally very difficult he saw no reason for therefore believing them to be identical. He had ordered an ointment containing 2 per cent. of salicylic acid and 3 per cent. of sulphur to be used and if the disease did not yield to this he should add some oil of cade to the ointment.

Dr. HERBERT TILLEY showed two cases of Chronic Frontal Sinus Empyema in which the radical external operation had been performed. In both cases the disease was bilateral. In the case of the female patient he had operated on both sides; in that of the male patient he had as yet only operated on one side. The results were extremely gratifying. In both cases relief was sought for nasal obstruction and profuse purulent nasal discharge. In neither case had headache been a prominent symptom. In each instance the maxillary antra contained pus. Dr. Tilley laid great stress on the importance of removing intra-nasal pathological conditions before proceeding to the external operation. His usual line of treatment was to remove the nasal polypi or chronic imflammatory products from the region of the middle meatus and also in all cases the anterior half of the middle turbinate bone, which was nearly always diseased in chronic cases and formed an obstruction to free discharge from the frontal sinus. If the antrum contained pus it was drained by the alveolar method. When the nose, and more especially the region of the middle meatus and anterior ethmoidal cells, was healthy then the external operation might be undertaken with every prospect of success. This consisted in making an incision in the inner third of the line of the eyebrow, terminating just above the internal palpebral ligament. The anterior wall of the sinus was removed entirely if the sinus was only of a moderate size, otherwise only a portion of it. The diseased mucous membrane was then thoroughly curetted and a large opening made into the nose (an enlargement of the normal fronto-nasal canal); this should be sufficient to admit the tip of the little finger passed up from the nose. A drainage-tube was inserted in cases where the sinus had not been obliterated. The wound was closed at the end of the operation by one or two stitches and the resulting scar was hardly noticeable. In the patients exhibited there was complete relief from all symptoms.—In reply to Mr. D'ARCY POWER, Dr. TILLEY said that the danger of operative interference in this region was much minimised by a careful preliminary study of and acquaintance with the anatomy of parts involved, and as the frontal sinus did not develop till the seventh year of age and remained small till after puberty, such treatment would be very rarely called for in young people.

Dr. WILLIAM EWART showed a case of Tachypnœa in association with Upward Dilatation of the Stomach. The patient, a female, aged 18 years, had suffered from infantile bronchitis and from habitual cough and for four years from shortness of breath on exertion. She had recently been laid up in bed for three weeks with rapid breathing, orthopnœa, oppression across the sternum, and discomfort at the left thoracic base. On admission the suspicion that the case might be one of hysterical tachypnœa was not confirmed by the aspect or history. Scattered wheezes were heard in the chest and the dyspnœa was genuine. The tachypnœa, which was not complicated with any increase of the pulse-rate or of the depth of the respirations, suggested the likelihood of upward dilatation of the stomach as a cause. This was also rendered probable by the distension and oppression at the lower sternum and the regurgitation of bitter-tasting food after meals. On examination the stomach was found to be dilated upwards as far as the level of the fourth

costal cartilage, rising above the level of the cardiac apex which was in the normal situation. The tympanitic note encroached upon part of the cardiac dulness and replaced the dulness of the left lobe of the liver. The chest did not present the usual signs of emphysema and subsequently gave ample respiratory movements as the patient recovered under appropriate gastric treatment. The tachypnœa was never extreme (53 per minute). On the day when the tachypnœa and respiratory distress were relieved a further examination showed that the upper boundary of the gastric resonance had returned to the normal level. Additional features of interest in the case were the liability to pseudo-rheumatic pains in the joints, the decayed condition of several of the teeth, and the presence of a tape-worm which had been allowed to remain without treatment for the last four years.—In discussing this case Mr. SEFTON SEWILL said that a point of interest was raised by Dr. Ewart's paper inasmuch as Professor Arkövy had some time ago described a bacillus which was constantly found in the pus of abscesses of dental origin, especially in those of a chronic nature. This was named "bacillus gangrenæ pulpæ" and Dr. William Hunter in a paper read before the Odontological Society of Great Britain had ascribed to its presence in the stomach several troublesome affections of that organ. The point was the importance of bringing the mouth into a thoroughly healthy state in all cases of disease of the stomach.

Dr. ALFRED EDDOWES showed: 1. A rapidly recovering case of Alopecia Areata. The patient, a male, aged 16 years, had been treated by several medical men but the disease had become nearly general and had been looked upon as almost hopeless. Thyroid extract was administered and lysol solution was applied locally with the result that the hair was rapidly returning to its normal colour and the patient was growing fast and improving in every way. Dr. Eddowes believed that the case was essentially leucodermia of hairy parts. He said that too many cases of alopecia occurred with leucodermia for the association to be merely accidental. He looked upon alopecia as a condition produced by several causes and not as a distinct disease. He had known leucodermia to be recovered from. He now had much greater success in treating alopecia than formerly. 2. Coccogenic Sycosis, which had commenced on the upper lip, apparently from infection due to discharge from the nose. The patient had had sore eyes for many years. Dr. Eddowes thought that the discharge from the eyes had infected the nose and thence the lip, and that it would be almost useless to treat the sycosis without treating the eyes. He had seen three cases of the kind in one afternoon at the hospital. He applied yellow oxide of mercury ointment to the eyes, with a dressing and bandage at night. To smear ointment on the lids in such a case was almost useless, as grease ran off wet eyelids like water off a duck's back. 3. Lupus Vulgaris in a condition like Scrofulodermia. 4. A woman suffering from Xerodermia of the Hands and Ichthyosis of the Legs, improving in health and condition of skin under thyroid extract.

Mr. DOUGLAS DREW showed a case of Large Fibro-Adenoma of the Breast.

The various cases were discussed by Mr. D'ARCY POWER, Mr. J. JACKSON CLARKE, Mr. DOUGLAS DREW, Mr. EDMUND ROUGHTON, Mr. SEFTON SEWILL, Dr. ARTHUR WHITFIELD, Dr. EDDOWES, Dr. HERBERT TILLEY, and the PRESIDENT.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

The Notification of Phthisis.—The Treatment of Gonorrhœal Arthritis.—Cases and Specimens.

A MEETING of this society was held on Feb. 2nd, Dr. GORDON BLACK, Vice-President, being in the chair.

Dr. SPOTTISWOODE CAMERON, in his remarks on the Notification of Phthisis, passed rapidly over the familiar ground of the importance of preventive measures in combating tuberculosis. He thought that the objections that would probably be raised against the notification of phthisis were of three kinds. 1. There was the important one of breach of confidence. The statutory obligation to report certain cases had in regard to such diseases done away with this difficulty; but in regard to phthisis, which was not at present included among these, the difficulty remained. Was it not, however, quite easy to get over it by obtaining the permission of the patient? 2. The second objection was that the notification was valueless. This, if sustained, was fatal. In answer to this it was contended: (*a*) that knowledge of cases enabled the sanitary authority to disinfect at intervals rooms occupied by phthisical patients; (*b*) it enabled them to suggest in some cases a certain amount of isolation and would indirectly lead to the strengthening of the hands of those who wished to see proper hospital accommodation provided for patients of this class; (*c*) again, the visit of the sanitary officer would often lead to dealing with such sanitary shortcomings as the overcrowding of dwellings; (*d*) notification would have the effect of educating the public as to the communicability of the disease and by the distribution of handbills and by friendly explanation do something to overcome the crass ignorance on this subject, especially of the poorer classes; (*e*) not the least important, perhaps, of the advantages which might be expected from notification would be the greater opportunity it would give the health officer of getting at the causes of the disease. Inquiring back from recent cases he would visit workplaces where the patients had been employed, ascertain perhaps that other sources of infection existed there, and remove conditions favourable to the spread of the disease. 3. The third objection might be that the system was impracticable. The best reply to this was that it was already in action. Dr. Cameron then referred to what has been done in some other large centres, and especially in Manchester. They were fortunate in having amongst them that evening Dr. J. Niven of Manchester who would no doubt explain to them the steps which had been taken in that city in this direction.—In response to the invitation of the Chairman, Dr. NIVEN described how the 500 cases which had been notified from public institutions in Manchester since September last had been dealt with. Every one of these cases had been visited by a medical man appointed for that purpose. The patient and his friends were personally instructed how to deal with the sputum to prevent its becoming dry and pulverised. He advised as to the disinfection of the rooms, reported on the source of infection and conditions of overcrowding, and investigated as to the source of the disease. The case then was placed on the list of the lady visitors, of whom the corporation had several. One of these ladies visited the house at intervals and saw that the measures advised were carried out, giving such assistance and advice as might be required. Up to the present the cases reported were chiefly well-marked ones, so that it had not been necessary to make arrangements for an examination of the sputum. This might be required when notification became more general. There were many advantages in having begun in Manchester with the modified notification of institution cases. They had learnt much and had got their machinery into working order. In regard to disinfection their most usual plan was to wash the walls down with a weak solution of chloride of lime, as recommended by Professor Delépine. They regarded the "clean down" as one of the essentials with dirty households. Speaking of the infectivity of phthisis, Dr. Niven mentioned that an investigation into the causation of a large number of fatal cases of phthisis had shown that in half of them there had been opportunities of infection from other cases of the disease.—Mr. H. J. ROPER thought that general practitioners were capable of diagnosing their own cases of phthisis and said that in his experience instructions such as those mentioned by Dr. Niven—viz., the using of spittoons containing carbolic acid or some other disinfectant to receive the expectoration, and the avoidance of the use of handkerchiefs, together with free ventilation of the apartments—were usually given by medical men to their phthisical patients in the ordinary routine of practice.—Dr. E. F. TREVELYAN thought that if the sanitary authorities were responsible for the public health it was only reasonable that facilities should be afforded them of satisfactorily coping with the infective diseases, and notification was one such facility. The notification of phthisis would undoubtedly enable them to lessen the mortality from phthisis, which in Leeds itself was over 600 per annum. With this notification the all-important question of educating the patient in regard to the spread of the disease to those about him became easier. Even now every phthisical hospital out-patient should receive simple printed instructions to enable him to avoid communicating the disease to others. The

notification of phthisis and its diagnosis were closely related subjects. In some early cases it was impossible to make a certain diagnosis from the physical examination even when taken in conjunction with the symptoms; in a proportion of such cases an examination of the sputum would be of assistance. Therefore he was in favour of the sanitary authority making provision for the examination of sputum of suspected cases free of charge, in the same way as was done for diphtheria and some other diseases. Dr. Trevelyan did not think that the notification of phthisis, judiciously carried out, should give rise to any friction between the medical profession and the sanitary authority.—Mr. J. HOLMES cordially agreed with what Dr. Cameron had said. He thought that not only should notification be adopted but that institutions should be provided for the treatment of the phthisical.—Dr. T. JOHNSTONE, medical officer of health of Ilkley, thought that phthisis, like all other infectious and contagious diseases, should be notified.—Dr. SANDERSON LONG and Dr. BRONNER also took part in the discussion and after some remarks from the CHAIRMAN Dr. CAMERON and Dr. NIVEN replied.

Dr. T. CHURTON read notes of cases of Severe Gonorrhœal Arthritis, a few simple, others complicated with rheumatism or with syphilis or both, in which the duration of the disease was apparently very much lessened by the frequent administration of sandal-wood and other oils, salicylates, and mercury.—Mr. T. R. JESSOP, Mr. E. SOLLY, Mr. B. G. A. MOYNIHAN, and Mr. J. W. DRAPER took part in the discussion and Dr. CHURTON replied.

Mr. H. LITTLEWOOD showed: 1. A patient on whom he had performed a month ago Pyloroplasty for Pyloric Stenosis due to Ulcer. The patient was a woman, 36 years of age, who had lost four stones in weight during the last 18 months and had vomited almost daily during that time. She had only vomited once since the operation and is now taking ordinary diet. 2. An Ovarian Cyst with a Twisted Pedicle and a specimen of Osteitis Deformans of the Tibia and Fibula.

The following cases, pathological specimens, &c., were exhibited:—

Mr. PRIDGIN TEALE: Tumour of the Breast.

Dr. E. O. CROFT: (1) The Uterine Appendages removed by Laparotomy, showing Tubo-ovarian Abscess; (2) a Calculus (weight 232 grains) removed from the Female Bladder by Vaginal Cystotomy; (3) a Calculus (weight five grains) passed spontaneously from the Female Bladder.

Dr. T. WARDROP GRIFFITH: (1) Two specimens of Stricture of the Œsophagus; (2) specimens of Rheumatoid Arthritis; (3) Rheumatoid Arthritis in a child following on Measles.

Mr. SECKER WALKER: A Diagrammatic Model of the Eye, designed for the teaching of refraction and accommodation.

Dr. CHURTON: (1) A Child with Anasarca without Albuminuria, but with Excessive Indicanuria; (2) a specimen of Cystin in the Urine.

Mr. MAYO ROBSON: Enlarged Axillary Glands (small round-celled sarcoma) of a few months' growth, secondary to a tumour of the breast (primarily an adenoma) of 16 years' duration.

Dr. TREVELYAN: (1) A case of Laryngeal Disease in a Child, probably due to Congenital Syphilis; (2) specimens of the Diphtheria Bacillus from a case of Primary Diphtheritic Stomatitis.

Dr. BRONNER (Bradford): Large Cholesteatoma removed from the Upper Part of the Middle Ear (attic); no subjective symptoms.

Mr. B. G. A. MOYNIHAN: (1) Two cases of Traumatic Birth Palsy; (2) Congenital Deformity of the Hands; (3) a case of Charcot's Disease of both Knee-joints.

Dr. J. B. HELLIER: The Uterus from a case of Eclampsia, showing Placental Site.

Mr. E. WARD: An Epithelioma of the Forearm.

Mr. P. J. CAMMIDGE: A Ruptured Liver.

Mr. LAWFORD KNAGGS: (1) Primary Resection of the Bowel for extensive Ulceration and Perforation in a Hernia (specimen and patient); (2) Gangrene of the Bowel and Hernial Sac, Primary Resection.

Mr. A. L. WHITEHEAD: (1) Case of Bilateral Paralysis of the Third Nerve; (2) skiagram of Steel Chipping in the Eyeball.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held at Hanover-square on Jan. 26th, the President, Dr. Ivor Murray (Scarborough), being in the chair.—Dr. Harry Campbell opened a discussion on the Treatment of Diseases of the Nervous System and Nervous Affections by Baths and Climate. He remarked upon the beneficial influence of mere change of air, which he connected with the wandering habits of primitive man. The open-air treatment was, he contended, beneficial in other diseases than phthisis, notably in nervous diseases. He referred to the large part which toxins played in neuropathology and to the potent influence of climate and baths on metabolism, and therefore on the toxicity of the blood. It was often advisable to put nervous patients through a preliminary treatment before sending them away, otherwise they might not benefit by the change. Dr. Campbell held that British health resorts were not so well equipped for the treatment of neurasthenia as some of the continental ones. He referred to the advantage of reducing high arterial tension in some nervous affections, and concluded by inviting discussion regarding the climatic and balneological treatment of sleeplessness, neuralgia, Graves's disease, epilepsy, chronic alcoholism, and morphomania.—Dr. Symes Thompson having testified to the importance of change of environment in functional and organic nervous diseases, Dr. Risien Russell instanced in illustration of the good to be obtained from baths in the treatment of chronic organic affections of the nervous system their ameliorating effect on certain troublesome symptoms in some diseases of the spinal cord. Peripheral neuritis was chosen to exemplify the beneficial effects of this mode of treatment in certain acute affections of the nervous system, but he insisted on the deleterious consequences to be expected from the indiscriminate use of baths in many other acute organic diseases. On turning to the consideration of functional affections neurasthenia was selected as an example of an affection the different varieties of which call for very different forms of bath treatment. The neurasthenic subject who required stimulating might derive much good from the cold bath properly given, while another class of neurasthenic patients might be injuriously affected by this measure and might nevertheless obtain benefit from the indifferent bath.—Dr. Bezly Thorne agreed with Dr. Harry Campbell in the opinion that auto-intoxication exercised a dominant influence in the causation of the greater part of nerve diseases. He believed that the influence of climate and of baths in relation to insomnia depended on whether they raised or lowered intra-arterial pressure. He had observed that in certain cases in which baths increased high tension insomnia was aggravated and *vice versâ*.—Dr. Karl Grube of Neuenahr said that he had often been struck by the small attention that had been paid in England to the balneological treatment of nervous diseases. Neither in the handbooks on nervous diseases nor in the books of balneo-therapeutics was sufficient mention made of this valuable form of treatment. This to him seemed all the more remarkable as some forms of nervous disease which were particularly benefited by bath treatment seemed to be very frequent in this country, as, for instance, neuritis. He had always found baths very effective in the treatment of neuritis, especially of those forms of neuritis with a great deal of pain. With regard to the various methods of bath treatment in nervous diseases Dr. Grube had found one rule of the greatest importance, and which might be expressed in the words, "Avoid extreme temperatures." Neither very hot nor cold baths seemed to do much good; on the contrary, they very often did harm by increasing the symptoms by their irritating influence. Indifferent baths—i.e., baths of a temperature of about blood-heat—were most beneficial. The nature of the water used—i.e., its chemical constituents—was only of very secondary influence.—Dr. Fletcher Beach said that in two cases, one of lateral sclerosis and one of tabes, which had been under his care the patients had been much benefited by residence at the seaside. The first patient had considerably improved and the lightning pains of the second patient had much diminished. Open-air treatment was especially desirable for mental as well as for nervous diseases and in all asylums patients were given as much open air as possible. Thus all asylums had large airing courts, and those patients who were fit for it were

employed in the garden or on the farm. The nervous system was thereby strengthened and recovery was assisted. In some cases of neurasthenia rest was desirable, and travelling or touring round the world did more harm than good. The effect of altitude on nervous disease varied; some patients improved, while others, especially those in whom sleeplessness was produced, deteriorated and had to live at a lower level. The absence of a complete system of baths attached to hospitals was a defect.—Dr. Fortescue Fox (Strathpeffer Spa) remarked that baths were of advantage, not in advanced disease (sclerosis), but in the early stages of such disease, and in many nervous disorders, especially those manifested by irritability and exhaustion.—Dr. Leon (Sidmouth) said that high altitudes and a dry bracing air had a vaso-constrictor influence, while the opposite applied to a low-lying humid situation, where the arterioles were dilated and the blood-pressure was low. Sleeplessness was common at high altitudes, and in this relation an article recently published showed the valuable effects of vaso-dilator drugs on the sleeplessness and restlessness of old age.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 18th, Dr. D. Burgess, the President, being in the chair.—Dr. Arthur Hall introduced a case showing the remains of Vaccination Pustules on the "Chapped Hands" of a girl, aged 15 years, who had not previously been vaccinated, and who about a month previously had nursed a recently vaccinated baby.—Dr. R. W. Gilmour showed a specimen of Adenoma of the Kidney from a patient who had died from apoplexy.—Dr. S. Riseley read the notes of a case of Abscess of the Brain following injury to the eyelid. The patient was a boy, aged one year, who was admitted to the Royal Hospital, Sheffield, on Oct. 20th, 1899, suffering from an abscess in the left upper eyelid; the lid was very prominent, dull-red, and glazed looking, and there was a small wound with sloughy edges and distinct fluctuation. Three weeks previously the child had run a rusty sharp-pointed file-maker's tool into the eyelid for about an inch. The wound did well for a time and then began to swell up. The wound was incised transversely and an excessive amount of pus escaped and on introducing the finger bare bone was felt. The wound was plugged with iodoform gauze. The temperature remained subnormal and the child apparently did well until the second night when meningitis set in; the temperature rose to 100° F., and the child died. Towards the last the eyeball could be seen apparently quite normal. There was escape of cerebral spinal fluid from the wound. The post-mortem examination showed a fracture of the orbital surface of the frontal bone. Lymph covered the brain on the upper and under surfaces, and on the under surface of the frontal lobe there was an abscess of the size of a large walnut, communicating through the fracture with the wound of the eyelid. The abscess cavity contained a little pus and some iodoform crystals and was lined with pyogenic membrane.—Dr. N. D. Bardswell read a report on eight months' trial of the Sanatorium Treatment of Phthisis at the Sheffield Royal Infirmary.[1] Accommodation had been made for 20 patients, but the conditions under which the trial had been made were disadvantageous. In the grounds hammock chairs protected by screens, &c., were provided for the patients, and a revolving shelter had been erected for accommodation in bad weather. Routine treatment had been for the most part modelled on that followed at Nordrach. Apyrexial patients spent the whole day in the grounds; those with pyrexia lay by open windows, the wards being well-aired throughout the night. Three chief meals were given—viz., at 6 A.M., 12.30 P.M., and 7 P.M. Extra butter, milk, and eggs were added to the infirmary "full diet," the diet being modified for individual cases when necessary. Carefully regulated walking exercise was allowed in cases where the temperature was never above 100·2° F. Pulmonary gymnastics were also employed in convalescing cases, systematic massage replacing exercise in bad cases. Practically no medicines were given except bitter tonics, cod-liver oil, and malt. Four-hourly temperatures were taken in the axilla, the pulse and temperature rates were recorded night and morning, the sputum was measured and recorded daily in drachms, and the weight was recorded weekly. In all 30 patients had been treated, 18 of them being still in the infirmary. The cases were unselected. By far the best results had been obtained in patients with a small amount of active disease and good general condition. Out of 17 such cases five had been nearly cured and had returned to suitable work and the rest were very much improved in every respect. Patients with extensive active disease and severe constitutional disturbance and those with phthisis laryngea had done badly, half of them dying and the rest improving in the summer to remain stationary or to relapse in the winter. As far as Sheffield Infirmary was concerned nearly all patients improved considerably under treatment from April to September, but during the winter months all except those with small lesions or those who were well advanced towards convalescence either ceased to improve or became worse.

[1] See THE LANCET, Nov. 11th, 1899, p. 1291.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.—A meeting of this society was held on Jan. 18th, the President, Mr. H. B. Angus, being in the chair.—Dr. W. P. Richardson showed a male child, aged 20 months, with Symmetrical Gangrene of the Feet of one week's duration, the result of Raynaud's Disease.—The President showed a man, aged 44 years, a miner, who was admitted to the Royal Infirmary with a swelling on the right side of the neck of two months' duration.—The members present were mostly of opinion that it was a dermoid cyst and this diagnosis was verified on removal of the tumour on the following day.—The President also showed a man, aged 66 years, with a large, irregular swelling of the neck of four years' duration, which had increased more rapidly during the last two years and was stated to frequently diminish in size towards night. It chiefly involved the right lateral lobe of the thyroid, reaching down to the clavicle and sternum. The diagnosis rested between malignant disease of the thyroid or a simple adenoma. The former was considered the more likely and surgical interference was not thought advisable.—Dr. W. E. Alderson showed a man aged 55 years with Dupuytren's Contraction present in both Hands. His occupation was that of an iron-turner which necessitated incessant pressure on the palms of both hands alike. 12 months ago stiffness unaccompanied by pain appeared in the right hand and the middle finger became gradually flexed. Six months later a similar condition appeared in the left hand, the ring finger being affected. Three months ago the patient sustained a severe lacerated wound of this affected finger which necessitated amputation on account of the tardy nature of the healing process. There was no hereditary influence, and no history of gout or syphilis, but the patient suffered considerably from muscular rheumatism. In the right hand a tense band could be felt running from the centre of the palm to the head of the third metacarpal bone where it crossed the interdigital cleft between the middle and index fingers to reach the outer side of the first phalanx of the former. Another band could be felt passing in the line of the transverse ligament to the index finger and a similar one between the index finger and thumb. The ring finger was affected to a slighter extent. The skin over the bands was adherent and puckered. The first and second phalanges of the affected digits were acutely flexed, whilst the third phalanx was extended. Adams's subcutaneous operation was advised and would be performed soon.—The President showed a man, aged 46 years, who had suffered from Dupuytren's Contraction of both Hands for four years. Both began to be affected about the same time and in each case the condition commenced in the ring finger and then affected the little finger. The man was a labourer and used tools which exerted pressure in the palms of the hands. During the last two years Adams's subcutaneous operation had been performed on three occasions and the hands had been splinted at night. In spite of this the contraction reappeared and last year an open operation was performed on one hand and the dense cicatricial band was dissected out. The result was excellent, although pressure on the scar caused pain. There seemed to be a predisposition to this condition in persons whose tissues were prone to undergo fibroid changes, whether from alcohol, syphilis, rheumatism, or gout.—Dr. A. H. Hobbs showed a curious case of Hysteria. The patient was a well-developed girl, aged 16 years, from whose left breast he had removed three sewing-needles which she had herself inserted. On examination several more were to be felt both subcutaneously and buried deep in the gland. No suppuration or enlargement of the axillary lymphatics had occurred; some pain and tenderness were present. The case was of interest as showing how much pain such patients would voluntarily inflict on themselves.—Mr. J. Clay read a

paper on Cæsarean Section, touching chiefly upon the most satisfactory procedures for performing the operation.

SOCIETY OF ANÆSTHETISTS.—A meeting of this society was held on Feb. 2nd, the President, Dr. J. F. W. Silk, being in the chair.—A discussion on the After-effects of Ether Inhalation upon the Respiratory System was opened by Mr. Sydney Rumboll (Leeds) who, in 1500 cases of the administration of ether preceded by gas, had only met with one case of bronchitis, one of pneumonia, and four of slight bronchial irritation; but in 60 per cent. of his earlier cases and in 30 per cent. of the last 400 the salivary and bronchial secretions were considerably increased, though quickly relieved after the first or second act of vomiting. These 1500 cases included every variety of surgical operation and were in no way specially selected; some had albumin in the urine, four had small quantities of sugar, and several had cardiac disease. Mr. Rumboll always used his own inhaler which was carefully disinfected before each administration, and in the earlier cases "anæsthetic ether," specific gravity 1017, was employed, but latterly "ether purissimus" of specific gravity 1020. He considered that in every sense the less ether used the better. The operating theatre was always kept at a temperature of 70° F., and every care was taken to prevent undue exposure of the patient. The time of year did not seem to make any appreciable difference to the amount of bronchial irritation; but catarrhal conditions were allowed to subside before any operation was undertaken. Of the six cases quoted Mr. Rumboll believed that the case of bronchitis was due to the cold operating room; the pneumonia was attributed partly to septic infection.—The President thanked Mr. Rumboll for his paper and read a letter from Dr. Macnaughton-Jones in which he stated that in his experience of ether of 30 years he had not noticed a single case of serious respiratory trouble following its use.—Mrs. Stanley Boyd read notes of six cases of respiratory trouble which had occurred in her experience during the four years 1895–98. Of these one was a case of lobar pneumonia, one of broncho-pneumonia, and four of more or less severe bronchitis. Five of these cases were abdominal sections.—Dr. Edwin Starling drew attention to the fact that of the cases referred to the majority occurred after abdominal operation, and he related a case of ovariotomy in which a fatal result followed in 36 hours from bronchitis and pulmonary œdema.—Miss Aldrich-Blake stated that at the Royal Free Hospital from 1895 to 1898 1250 ether administrations were recorded, and of these only three developed any serious pulmonary trouble. One of these was a case of operation for injury to the chest wall, which was followed in three days by pneumonia; in another the pre-existing physical signs of phthisis were considerably increased; and in the third, a case of radical cure of hernia, rusty sputum was noticed three days after the administration.—On the motion of Dr. Dudley Buxton, seconded by Mr. Noble, the discussion was adjourned, and the President expressed the hope that at the next meeting of the society on March 2nd further facts in elucidation of this very important and interesting subject would be brought forward.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Royal Kent Dispensary on Feb. 2nd, the President, Mr. C. J. Parke, being in the chair. Three new members having been elected the house surgeon of the Miller Hospital (for Mr. Poland) exhibited a case of Tumour of the Scrotum. Dr. Septimus Sunderland then read a paper on Some Cases of Pelvic Pain in which the Diagnosis was Difficult. The paper was discussed by the President, Dr. F. S. Toogood, Mr. A. E. Joscelyne, Dr. Leonard Williams, Mr. G. C. Williams, Dr. F. J. L. Hart, and Dr. J. H. Keay. The meeting then adjourned until March 2nd when there will be a clinical evening.

CHARD WATER-SUPPLY.—At the meeting of the Chard Town Council held on Jan. 30th it was stated that the solicitors of Earl Poulett had reported that Mr. Justice Kekewich had granted a period of six months for the council to carry into effect their proposed new scheme of drainage, consequently the threatened proceedings of Earl Poulett against the town council for the alleged pollution of the Chard reservoir by the discharge of sewage would be rescinded.

Reviews and Notices of Books.

Progressive Medicine: A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica to the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital, &c. Vol. I., pp. 490, Vol. II., pp. 468. Vol. III., pp. 440. 1899. London: Henry Kimpton. Price 12*s.* 6*d.* each volume.

UNDER the somewhat cryptic title of "Progressive Medicine" appears a new periodical publication the intention of which is to provide medical men with the latest information as to the progress which is being made in the various departments of medicine and surgery. Many attempts have been made from time to time to record in a comparatively small space all new facts that have been published during the year, but in most cases the result is likely to be almost useless, as the valuable observations and records of the year have not been separated from those which are unworthy of being permanently recorded. This work is a quarterly publication which contains articles on all the branches of medical science, each one written by a recognised authority on that particular subject; in each article the additions to our knowledge, which are of value from their own intrinsic merit, are arranged in a readable and well-digested form. The whole of medicine and surgery are divided up among the four volumes which appear in one year, and that there may be a real uniformity in the work the general editor, Dr. H. A. Hare, has exercised a careful supervision over the individual articles. The first article of the first volume deals with the surgery of the head, neck, and chest, and is written by Dr. J. C. Da Costa. It commences with an account of the modern surgical treatment of exophthalmic goitre; the operative procedures which are most strongly recommended are described and discussed and then the author sums up our present knowledge in a few sentences. Not every subject is dealt with, only those being noticed in which some valuable addition to our knowledge has recently been made. For example, we may refer to an article of this same section in which Dr. Da Costa describes the treatment of wounds of the lung; here we find an interesting account of wounds of the lungs by bullets and we are told that Dr. Senn in the late Spanish-American war found that many patients who had been shot through the lung with a Mauser bullet recovered under the treatment of rendering the surface aseptic and sealing the wound hermetically. Few cases of hæmothorax require operation, but the author gives a brief account of a case under his own care in which severe secondary hæmorrhage from a wounded lung occurred into the pleural cavity; the chest wall was laid open and more than a gallon of blood was removed. The bleeding lung was surrounded by packing which arrested the hæmorrhage and the man ultimately recovered. During the operation two quarts of saline fluid were introduced into the median basilic vein.

It is obviously impossible to describe fully the contents of these very interesting volumes but we will mention the names of the writers who have contributed the several articles.

Dr. Alexander D. Blackader of the McGill University, Montreal, is responsible for the article on the Diseases of Children. Dr. Ludvig Hekboen, Professor of Pathology in the Rush Medical College, Chicago, has written on Pathology. Dr. W. S. Thayer has contributed the article on the Infectious Diseases, including Croupous Pneumonia. This contains a long and valuable account of the present state of our knowledge of malaria and the malarial parasite. In the section on Typhoid Fever the author gives a summary of

Bushnyco's method of treating the disease by a liberal diet, consisting of bread, boiled meat, a cutlet, soup, milk, and an egg. So far as can be judged from statistics founded on 154 cases, in 80 of which the diet was adopted while the remaining 74 were fed on milk only, the cases treated by the fuller diet have a slightly higher percentage of recoveries and a shorter stay in hospital. Dr. Thayer in commenting on this diet asks, "Is it not more than likely that many cases of typhoid fever suffer from too restricted a diet?"

Dr. A. Logan Turner of Edinburgh has written the article on Laryngology and Rhinology, and Dr. Robert L. Randolph of the Johns Hopkins University, Baltimore, has supplied the section on Otology.

The second volume commences with an account of the Surgery of the Abdomen, by Dr. William B. Coley, who occupies 140 pages with an excellent *résumé* of all that is new in this department of surgery. Perhaps the most interesting, and certainly the fullest, description is given of the operative treatment of hernia and many useful illustrations accompany it. Dr. W. S. Halstead is quoted as saying that "the licence to practise general surgery should be withheld from those who have not practised on animals the operation for circular suture of the intestine and intestinal anastomosis." There is a great fallacy in this recommendation, for the intestinal wall in dogs is decidedly thicker and therefore more easily sewn than is the wall of the human bowel.

Dr. J. G. Clark of the Johns Hopkins University, Baltimore, deals with the subject of Gynæcology, and amongst other things he discusses fully a valuable paper by Abel on the methods of abdominal suture and their relationship to the production of post-operative hernia, with very careful statistics which show clearly that this form of hernia is least common when the fascial layers have been carefully brought together.

Dr. Alfred Stengel of the University of Pennsylvania writes on the Diseases of the Blood, Diathetic and Metabolic Diseases, and Diseases of the Spleen, Thyroid Gland, and the Lymphatic System, giving an especially interesting account of diabetes mellitus. The concluding article in the second volume, on Ophthalmology, is from the pen of Dr. Edward Jackson of Philadelphia and occupies 90 pages; it is carefully and concisely written.

The third volume commences with an account of the Diseases of the Heart and Lungs by Dr. William Ewart of St. George's Hospital. It ranges over an extensive area and is judiciously moderate in its estimation of the value of the many recently advocated therapeutic measures for the treatment of diseases of these organs. Dr. Stelwagon of Philadelphia writes on the Diseases of the Skin. The case of chromidrosis which is described was in all probability due to malingering, although it is stated that it was found that the manifestation was not artificial. The article represents very adequately all that has recently been done in this department.

Dr. W. G. Spiller of Philadelphia has contributed the account of the Diseases of the Nervous System and Dr. R. C. Norris that of Obstetrics. They are both very satisfactory and we may especially mention in Dr. Norris's article the section on the Surgery of Obstetrics.

These volumes are well printed on good paper in clear type; they should prove of value to every medical man.

The Races of Man: an Outline of Anthropology and Ethnography. By J. DENIKER, Sc.D. Paris, Chief Librarian of the Museum of Natural History, Paris. The Contemporary Science Series. London: Walter Scott, Limited.

THIS handy volume is designed for the use of those who wish to obtain rapidly, from a trustworthy source, some general notion of the ethnographic and anthropological sciences, and to understand the foundations on which they are based. Some knowledge of these subjects of scientific inquiry is desirable as prefatory to, and concomitant with, the study of men and diseases among the many nationalities of the British Empire which includes races so essentially different as negroes, Arabs, Bushmen, and many cultivated Eastern races. The medical officer who is called upon to introduce hygienic measures for the removal and prevention of disease will find it important to acquire some knowledge of the people with whom he has to deal; the means to be employed for eradicating ophthalmia or malarial fever should be based upon some knowledge of the physical characters of the people to be dealt with as well as of the nature of disease; while an appreciation of their laws, habits, and customs may have a distinct bearing on a decision as to the wisest methods of carrying into practice the necessary sanitary arrangements.

Local customs as well as endemic diseases are well worthy of study; it may be found that particular ethnical groups in a locality show recognisable forms of proneness to, or exemption from, special diseases. Every country has its own varieties of physical type, language, manners, and customs—matters of as much importance to the physician as their psychical peculiarities and religion are to the governor and the teacher. The simplest and best established methods of anthropological observation may be usefully adapted to clinical study as indicating noteworthy points and showing what to look at, and what to look for, in the individual case.

The volume before us fully maintains the reputation of the Contemporary Scientific Series. The author speaks with a full knowledge of his subject and experience gained as librarian of the Museum of Natural History, Paris. He writes with the intention of imparting to the reader as much well-arranged information as is possible within the compass of his book as a stimulus to the student rather than as a complete account of anthropology as a science. The book is the more readable as Dr. Deniker, while enthusiastic in his work, does not attempt to impress any predominant theory of his own. The purpose of the author is to place before the reader in simple form the essential facts of the twin sciences of anthropology and ethnology, and while at times expressing his personal opinions on many questions of anthropology in general, such as "the classification of states of civilisation," he refrains from reiterating any predominant views of importance to the special student of anthropology only, or otherwise diverting attention from the main object of interesting and informing the reader upon the subjects dealt with.

Looking at the races of man the definite facts before us are the groups of mankind presented as Arabs, Swiss, Australians, Bushmen, Siouan Indians, &c. These do not represent unions of individuals which, in spite of some slight dissimilarities, are capable of forming what zoologists call "species" or "varieties" in the case of wild animals, or "races" in the case of domestic animals. They are *ethnic groups* formed by virtue of community of language, religion, social institutions, &c., which have the power of uniting human beings of one or several species, races, and varieties. The social groups are formed by the union of individuals belonging usually to two, three, or a greater number of "somatological units" known by aggregations of physical characteristics such as physiognomy, stature, or anthropometrical and physiological peculiarities combined in a certain way. A distinction is then to be drawn clearly between the ethnical and somatic groups; in other words these two important modes of classification must be clearly understood and distinguished.

There are certain somatic characters distinctive of man and apes; the erect attitude, curvature of the spine, the size and structure of the brain, and the morphology of the skull and

the teeth; these differences being less accentuated in the fœtus and in the young than at the stage of adult development. Distinctive characters of man are found in (1) morphological development as studied anatomically, and (2) in physiological and psychological peculiarities; these differ much in their variations according to sex, age, and race. It is interesting and instructive to note the points which scientific research has shown as the most distinctive somatic characters of the human races, for these are also worthy of record in the description of individuals in clinical study, especially when recording the personal equation of the individual or the signs of degeneration, whether a reversion in type or an example of decadence following inheritance of an adverse environment. Among morphological characters cranial measurements stand first, but the author acknowledges that "peoples or ethnic groups being formed of various elements, it is in most cases impossible to determine, after the examination of an isolated skull, to which population it belongs; all that can be said is that the skull is brachy- or dolicho-cephalic, orthognathous or prognathous, &c." Stature varies in each race with sex, age, and external agencies, but at the same time it is true that these variations are also produced in a similar way in all races and cannot exceed certain limits imposed by race.

This interesting work is mainly descriptive of the ethnical characters of the human races, including their linguistic and sociological characters as well as an account of the European, Asiatic, African, Oceanic, and American peoples. The illustrations, to the number of 175, are well executed, mostly from original photographs, and indices of bibliography and of the subjects treated add value to the volume.

Experiments on Animals. By STEPHEN PAGET, F.R.C.S. Eng. With an introduction by Lord LISTER. London: Baillière, Tindall, and Cox. 1900. Pp. 274. Price 6*s*.

IN this work Mr. Stephen Paget has placed before those of the public who care to read it the evidence that has led the vast majority of the profession to approve of vivisection when performed, not carelessly or thoughtlessly as boys harry a toad or hunt a cat, but with some distinct object in view, or for the resolution of some problem which cannot otherwise be settled, or for the direct advantage of man or animal. Commencing with Galen, who showed that the brain was hot and not cold as was then generally believed and that the arteries contained blood, he passes in review the experiments of Realdus Columbus and the far more important ones of Hales and Harvey, and shows how important a bearing they had on the advance of physiological knowledge, and especially on the physiology of the circulation, and how this again assisted the progress of surgery. The knowledge of the certainty and constancy of the establishment of the collateral circulation after the ligature of an artery, which could only be learnt by experiment on the living animal, enabled Hunter to anticipate recovery after ligature of a large artery in cases of aneurysm and to replace by that operation the far more fatal one of amputation which was then generally adopted. In the next chapter the value of the experimental method is insisted on in regard to digestion by comparing the knowledge of that process possessed by the ancients with that which followed the experiments on the living animal performed by Réaumur, Spallanzani, Dr. Beaumont, and Claude Bernard. The discoveries made by the last-named experimenter on the glycogenic function of the liver are shown by Mr. Paget to have had great influence on our theory and treatment of diabetes. He then points out the value of experiments performed by Du Hamel, Bichat, Stanley, and others on living bone in demonstrating the function of the periosteum and in promoting the surgery of the osseous system. Still more important has been the practice of vivisection in determining the function of the nervous system and consequently the proper practice of medicine; and Mr. Paget rightly observes, "If a better understanding of the nervous system could have been got without experiments on animals why had men to wait so long for it? The Italian anatomists had long ago given them all the anatomy that could help them. The hospitals and practice had given them clinical facts for many hundred years; nervous diseases and head injuries were common enough in the middle ages, and by the time of Ambroise Paré, if not before, post-mortem examinations were allowed. The one thing wanted was the experimental method and for want of it the physiology of the nervous system stood still." That method was adopted with the best results by Bell, Magendie, Marshall Hall, Flourens, Bernard, and the numerous experimenters of the present day. We have not space to comment on the chapters which Mr. Paget devotes to inflammation, suppuration and blood-poisoning, anthrax, tubercle, diphtheria, rabies, cholera, plague, malaria, and poisoning by snake venom, but in each and all of these conditions he dwells on the immense value of the researches that have been undertaken upon living animals in following out the nature and course of disease and the benefits that have been derived from this mode of investigation. The only omission which we have noticed is that of skin grafting. The questions discussed by Mr. Paget have been carefully considered by him in his capacity of secretary to the Association for the Advancement of Medicine by Research and the perusal of his work will satisfy all but fanatics that experiments on living animals when undertaken with a due regard to the objects in view have proved of the greatest importance in the progress of medicine; and it may be added that in a large number of instances the risks and dangers which such operations involve would be cheerfully undergone by the operators themselves.

A Manual of Surgery for Students and Practitioners. By WILLIAM ROSE, M.B., B.S. Lond., F.R.C.S. Eng., Professor of Clinical Surgery in King's College, London, and Senior Surgeon to King's College Hospital; and ALBERT CARLESS, M.S. Lond., F.R.C.S. Eng., Surgeon to King's College Hospital and Teacher of Operative Surgery in King's College, London. Second edition. London: Baillière, Tindall, and Cox. 1899. 8vo, pp. 1190. 400 Illustrations. Price 21*s*. net.

WE were able to speak with much approval of this work when it first appeared and we are glad to see that it has been so much appreciated by the professional public that already a second edition has been called for. The whole of the text has been revised and parts have been rewritten; some illustrations have been omitted and others added; much new material has also been added, but there has been an increase of only about 30 pages in the size of the book. It may certainly be looked upon as fully up-to-date and there is little with which we cannot agree, but we may mention that the rhinoplastic flap figured on p. 706 is not of a shape best calculated to form a presentable nose; a better shape is that given in THE LANCET of Feb. 21st, 1891, in a paper by Brigade-Surgeon-Lieutenant-Colonel Keegan. We would urge the authors not to allow the book to grow any larger, a morbid tendency frequently displayed by otherwise healthy works. At its present size it still forms, as we mentioned in our review of the first volume, the most suitable book for all except the higher examinations in surgery.

The Use of Lead Compounds in Pottery from the Potter's Point of View. By WILLIAM BURTON, F.C.S. London: Simpkin, Marshall, Limited. 1899. Price 1*s*.

THE views of the potter in regard to innocuous glazes must be listened to with respect. Theory may indicate what might be done but practice only can be decisive. Mr. Burton is a director of a large firm of pottery manufacturers and is perfectly prepared to adopt methods which are calculated to alleviate the suffering arising from the use of lead

compounds in pottery manufacture. He is not opposed to reform on this head so long as it does not threaten the vital interests of the industry. The little work before us is devoted mainly to a criticism of the report issued by Professor Thorpe and Professor Oliver on the Use of Lead Compounds in Pottery on behalf of the Home Office. He differs from these authorities in regard to the means which they suggest for minimising the evil effects of lead compounds, and gives his reasons why their conclusions can only be very partially adopted in the English pottery trade. His statements are very temperate, in good taste, and reasonable, and regarding the old adage, *audi alteram partem*, must be seriously considered. Mr. Burton holds that much good would be done if the work-people could be prevailed upon to adopt ordinary reasonable care and common sense in obeying the special rules of the Home Office and in using the appliances. It is satisfactory to note that Mr. Burton believes that the time has come when the use of raw lead in glazes may be prohibited and he only asks that sufficient time should be given to those manufacturers who have had no experience in the use of fritted lead compounds to carry out experiments for their adoption. That is a reasonable enough request which the Home Office, as we recently announced, is inclined to grant.

LIBRARY TABLE.

Our Secret Friends and Foes. By PERCY FARADAY FRANKLAND, Ph.D., B.Sc., F.R.S. Fourth edition, revised and enlarged. London: The Society for Promoting Christian Knowledge. 1899. Pp. 268. Price 3*s*.—Bacteriology is a subject which is not easy to present in popular terms, but Professor Frankland has succeeded well in this little work, for it is written in a very interesting and intelligible way, such as makes it well adapted for the class of readers—the uninitiated—for whom it is intended. The book belongs to the "Romance of Science Series" and is published under the ægis of the General Literature Committee of the Society for Promoting Christian Knowledge. The chapters are based on a series of lectures delivered before popular audiences. The subject matter is, however, expanded by the opportunity which publication affords. The rôle of organisms in disease and in great natural processes is eloquently described. It would be well for the public to read this excellent little story of the ways of bacteria in order that false and dangerous conceptions which are very generally current may be removed. The average man in the street has a curious idea of the microbe in regard to its nature and size and invariably he thinks it a deadly thing which should at all costs be destroyed. An intelligent perusal of Professor Percy Frankland's book will teach him, however, that amongst the myriads of bacteria around us we may count more friends than foes. We are yet merely on the fringe of the subject with regard to those functions possessed by many bacteria which are of importance to the well-being of the human race.

An Introduction to Analytical Chemistry. By D. G. HENDERSON, D.Sc., M.A., F.I.C., and M. A. PARKER, B.Sc. London: Blackie and Son. 1899. Pp. 224. Price 5*s*.—The plan of this book is progressive, the student being introduced first to exercises on characteristic reactions of the metallic salts and the acids and bases before he proceeds to the analytical classification of the metals. Then follows a section on acidimetry and alkalimetry and afterwards an analytical classification of inorganic acid radicles. Having mastered this important part of the subject the student may proceed to the general scheme for the analysis of inorganic substances. The authors have included a useful section on the analysis of alloys. Finally, the grouping of the organic acids connected with a scheme of detection is given, while the characteristics of organic bodies, such as aniline, urea, and chloroform, follow as being outside any scheme of grouping. We have carefully examined the directions given and we know from practical experience that they are reliable. The application of the spectroscope to analysis might with advantage have been amplified. The book is an excellent laboratory companion for those entering upon a course of elementary analysis.

The Year-book of Pharmacy, 1899. London: J. & A. Churchill.—The thirty-sixth annual meeting of the British Pharmaceutical Conference was held last year at Plymouth, and the transactions of this conference are reported in this volume. This fact, however, by no means forms the most valuable feature of the Year-book. The committee of publication take some considerable trouble to publish concurrently with the transactions abstracts of papers relating to pharmacy, materia medica, and chemistry which have been published in British and foreign journals for the preceding year. In this way the advances that have been made may be seen at a glance. The introductory chapter is an admirable summary of these advances and is a valuable source of reference, as it affords also very instructive reading to the progressive pharmacist. The papers read this year at Plymouth were of unusual interest and not disappointing in number. The conference will meet this year in London. The Year-book is quite up to its usual standard and is full of matters of importance to the pharmaceutical profession.

Practical Hints on the Analysis of Water and Sewage. By SIDNEY BARWISE, M.D. Lond., D.P.H. Cantab. London: Rebman, Limited. 1899. Price 2*s*. 6*d*.—This little book is especially written for the use of medical officers of health who, while desiring to make as complete an analysis of water or sewage effluent as is essential yet possess little time for making an elaborate experimental inquiry. The subject could hardly be put in simpler terms both in regard to details of processes and to the construction which may be put upon the results. In this way the book should be of distinct assistance to those requiring a knowledge of the analysis of water and sewage sufficient to enable them to give a definite judgment one way or the other. Apparatus suitable for the special work is described and illustrated. The chapter on bacterioscopic examination of drinking waters is desirably brief and to the point. Dr. Barwise writes with authority on the subject and as the book is the result of his experience of analytical processes and of the interpretation to be placed thereupon it will be consulted with assurance. Further his style of writing and his descriptions are clear so that the essentials of this department of sanitary work will be readily understood by the student and the medical officer.

Examination of Water for Sanitary and Technic Purposes. By HENRY LEFFMANN, A.M., M.D., Ph.D. Philadelphia: P. Blakiston's Son and Co. 1899. Price $1 25c.—Our estimate of this little volume in the review of the original edition was correct, of which the fact that the book has since undergone revision and enlargement for the third time is confirmatory, the present issue being the fourth edition. We cannot note many important changes, and indeed the author admits as much for "no great advance in analytic methods in this field has taken place since the publication of the third edition." The methods prescribed are in very general use, having been stamped by experience as correct, expeditious, and most convenient. The author, however, notes that some change of opinion as to the value of bacteriological examinations has taken place. While bacteriologists at one time were tempted to discredit the value of chemical analysis they were now disposed to admit that up to the present time the detection of pathogenic bacteria in water is so difficult a task as to be rarely accomplished. In the addendum the filtering apparatus devised by Dibdin is described. The name Dibdin is spelt incorrectly Dibden. The utility of this little work is clearly recognised.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 10, 1900.

As medical journalists we have nothing whatever to do with such political questions as do not happen to affect the interests of the medical profession or the health and well-being of the community at large; but we occupy, perhaps on that very account, a position of advantage in that we can regard questions of national interest and public importance from a perfectly independent and impartial standpoint. We can note the trend of public opinion and listen to the reflections and observations of the more thoughtful people among us with a mind unbiased except where we are participating in patriotic feelings which we share in common with most citizens of the British empire. We are sure that our readers hold with us the belief that it would have been well if much of what has been said and published regarding the conduct of the South African war had never seen the light. Apart from the consideration that a good deal of what has appeared on one day, having no foundation in fact, has disappeared on the morrow, the undignified tone of exaggeration and sensationalism adopted by a certain class of journals has been a frequent cause of additional anxiety and pain to those who have relatives or friends at the war, as well as the origin of much needless misapprehension on the part of the public. These things concern the medical profession deeply, for the health of those whose feelings are thus wrung is our particular care. Critics seem to forget when speaking of the war that it is so easy and at the same time so futile to be wise after the event; every speculator would have made his fortune had he known and realised before investing his money all the facts and their relative proportion and importance to one another beforehand. The political situation in South Africa was altogether exceptional and unprecedented and the actors, especially the military commanders, had to accept the position just as it stood under unfavourable conditions. They have not done so badly as the British public has been led to believe. More than that it is not within our province to say.

Members of the medical profession have used their opportunities for estimating the feeling of the army in South Africa, and the intercourse between the sick and wounded and their medical advisers is close. All the misgivings and adverse criticisms which find expression here have had little or no place among those who are fighting our battles in the field. The troops in South Africa seem to be in excellent health and fettle, and confident of success and of the ultimate result of the war. The dominant feeling among the wounded who have arrived in England is to get well enough to return to duty. Could such be the case if they felt that they were serving under incompetent or bungling commanders? There is no such feeling prevalent among those who surely ought to know best. Officers and soldiers have alike recognised that the preparations and arrangements for the campaign have been on a large and liberal scale; they speak in grateful terms of the medical service; and regard the reverses under which our arms still abide as in the main attributable to the adverse conditions under which the war was undertaken—and under which it has had to be carried on up to the present time. It was our pleasure last week to refer to the way in which the officers and men of the Royal Army Medical Corps are bearing themselves as one of the bright spots of the present war; and it is only proper and fitting, at a time when the nation is moved by a widespread and genuine feeling of patriotic enthusiasm, and when so much is being done for the aid and comfort of our soldiers and their families, that the requirements of the Royal Army Medical Corps in this respect should not be lost sight of. We are very glad, therefore, to announce that the establishment of a Fund for the benefit of that corps has been taken up in earnest. We have already announced the formation of this Fund, and in another column will be found an account of a meeting held in furtherance of this end on Monday last at Sir DYCE DUCKWORTH'S residence in Grafton-street.

It will give the greatest pleasure to the medical profession to help their colleagues of the Royal Army Medical Corps—and the call is, we are glad to say, being handsomely responded to by the heads of the profession—but we think that what is also wanted is a widespread expression of appreciation, sympathy, and good will on the part of the lay public. The work of the Royal Army Medical Corps has been splendidly done on behalf of the wounded sons of the public and deserves to be widely recognised by all. We trust therefore that our readers will bring to the notice of their friends and patients the institution of this Fund. If they do this they can secure for it at once the large patronage that under the circumstances it certainly merits. As far as the amount of the subscriptions go we think that Surgeon-General MUIR'S suggestion, which follows, is sound. The donations should be small, so as to bring the list within the reach of all who are desirous of joining in it—say half a crown for members of the medical profession throughout the United Kingdom and more or less than that sum for those outside the profession. The labours of the men who have had the proud privilege of caring for the sick and wounded on the battle-fields and in the war hospitals of South Africa, where timely succour has been so sorely needed, have stood out prominently during the present campaign, and we are sure that the Fund in their behalf only needs to be brought to the attention of the public to secure immediate support. We shall be glad to receive and acknowledge subscriptions, which may also be sent to the Treasurer of the Fund, Mrs. CHARTERS SYMONDS, at 58, Portland-place, W. Contributions in kind should be directed to Miss MAXWELL-MULLER, R.R.C., at 100, Victoria-street, S.W.

THE excellent address of Dr. J. F. GOODHART delivered recently before the Reading Pathological Society and published in our columns[1] raised many interesting points worthy of the consideration of our readers. It is not our

[1] THE LANCET, Jan. 6th, p. 1.

intention to review that address here, but rather to dwell upon one or two of its lessons. Dr. GOODHART was dealing primarily with the question of "acidity," of uric acid acidity, and with the stereotyped set of ideas which have gathered about this ailment, almost as defined and unvarying as the crystals of uric acid itself. But the main moral of his address was that each individual case is a separate study to be judged independently by the medical practitioner. "I want you all to go back upon your own experience, to put away all that you have read and seen through other people's spectacles, and to observe again afresh and then to answer the question, 'Is it so?'" There is great need for such teaching nowadays, when every symptom has its special medicine and when our consulting rooms have become the receptacle of remedies the very name of which is not to be found in the latest books of materia medica. The medical man must guard against the risk of becoming a slave to any set of ideas, even to his own. The most open-minded practitioner is apt to close up his experience too soon and too confidently, and to overlook aspects and causes and complications of disease which a little more time and insight would disclose to him and the revelation of which would add tenfold to the interest and value of his work. Much more is this true of the practitioner who cannot be called open-minded—he who has a ready label for every case and a routine medicine for its treatment.

Dr. GOODHART indicated a source of information not always sufficiently drawn upon by the medical practitioner—the patient. We all know that he who is his own lawyer has a fool for his client. Medical men are not always good therapeutists in their own cases. Much more obvious is it that the judgment of laymen as to their medical care cannot generally be of much value. Medical practitioners, even those whose work lies among the intellectual and influential classes, must often be struck with the obtuseness of clever people in regard to the nature and processes of disease. Geniuses, even, such patients may be, but they cannot understand the simplest medical procedures, either when set in motion for themselves or for the members of their family, and are often more difficult to guide than a plain unsophisticated working man. But there is a way in which every intelligent practitioner finds assistance from the views and experience of his patients. There is often in patients a quick and keen sense of the suitability of medicines or of diet prescribed, and he little knows his profession who does not heed such impressions and take them into his consideration. Dr. GOODHART says of the phenomena of uric acid excess that they form a problem in *animal* chemistry. We might almost say that they form a problem in *personal* chemistry, for the production of excessive uric acid in any given case depends on different factors from those which produce it in another case. One man will suffer from one wine and another from another; a third man will have a severe attack who takes no wine at all, or beer, though it by no means follows that his attacks have no relation to wine or beer drunk by his forefathers. The children's teeth may be set on edge by sour grapes which they have not eaten. A fourth man may owe his attack to overwork and a fifth to cold. In all these things the experience and narrative of a patient will guide the medical man. But we should scarcely go so far as Dr. GOODHART when he says that a man must decide for himself whether he requires a stimulant, or when he seems to leave the selection of that stimulant and its dosage very much to the patient himself. We should have to extend the same principle to women. Surely all physicians, and not only gynæcologists, would say that the feeling of "requiring a stimulant" in women was a dangerous guide for the exhibition of stimulant apart from medical advice.

Dr. GOODHART lamented that men nowadays drink whisky whereas in his early days they drank beer. He says, with no exaggeration we fear, that quite young men often confess to three or four glasses of whisky a day—"a poisonous drink to them, without the least idea of the harm that is accruing to them." It is obvious that such practices are well-nigh suicidal and that men who indulge in them, if they are to be saved from the results of their weakness, must be advised without reference to their own sensations. Dr. GOODHART thinks that medical men are largely responsible for the degree in which whisky is used to the exclusion of honest wines and beer. He says, "We tell everybody to drink whisky." It is serious that so good and so genial a judge of his fellows as Dr. GOODHART should lay at the door of the medical profession this great responsibility, but we believe that his words convey in a general sense the truth. Medical men are too ready to take the patient's tastes and sensations into consideration when they should assume the entire responsibility of advice, while in the matter of the patient's symptoms they may be too ready to think that the sufferer can tell them nothing which they do not know. The subject of diet—and especially of drink—is the last subject on which patients should be allowed to guide the treatment of their cases. The immediate effects of the favourite ingesta are comfortable; the ill-effects are remote and ulterior and cannot be foreseen by the patient. There are certainly times when the patient may be taken into consultation with advantage, but he must not be allowed to dictate either the occasions or the doses of his stimulant, or disaster may follow.

A CASE which may be somewhat trivial in itself, but which is of curious historic interest to the modern representatives of the barber-surgeons, was lately decided in the Court of Appeal. The appellant was a hairdresser who exercised his worldly labour upon the Lord's Day at Wolverhampton and was fined by the stipendiary magistrate to the amount of half a crown and costs. The statute under which the conviction was made provides that no tradesman, artificer, workman or labourer, or other person whatsoever shall do or exercise any worldly labour, business, or work upon the Lord's Day, or any part thereof, works of necessity and charity only excepted. It was not argued that the work was either one of necessity or of charity, but counsel contended that the Act did not apply to barbers and hairdressers because they were not *ejusdem generis* tradesmen, artificers, workmen, or labourers. It was well known, he said, that at the date at which the Act was passed the

profession or business of a barber was of more importance than it is at the present time, and that it was formerly associated with that of surgery. Had the legislature desired to forbid this business on Sunday it would have expressly mentioned barbery amongst the occupations which were prohibited. In the reign of HENRY IV. barbers were incorporated in a craft, and surgeons were enjoined for their protection against blood-letting and the craft of barbery. On behalf of the respondent it was contended that the appellant came within the terms of the Act because he earned his living by the work of his hands, but in contradiction to this the appellant's counsel quoted the speech of the cobbler in JULIUS CÆSAR in which he said, "All that I live by is with my awl, I meddle not in tradesmen's matters." In giving judgment MR. Justice CHANNELL said that they had not to consider whether the appellant was a tradesman within the meaning of the Act. This was rendered unnecessary by the way in which the summons was framed. The court, however, would not base their judgment on that single point because should they do so it might be assumed that the appellant's business came within some of the remaining words of the Act. The Act related to certain specified persons; the words "or other person whatsoever" were to be read *ejusdem generis* with the preceding words. The word "tradesman" was intended to mean a person who carried on the business of buying and selling, an artificer meant someone who had made something; the words "workman or labourer" would not apply to the appellant. The contention of the counsel for the appellant that a barber's was a well-known business and of more importance formerly than at the present time was an additional argument to show that a barber was not one of the persons to whom the Act was intended to apply. Mr. Justice BUCKNILL concurred.

We do not wish to question a decision which will in future prevent the prosecution of hair-dressers in some places for what their fellows might do with impunity in other districts. It is, however, interesting to recall the fact that THOMAS ARUNDEL (FITZALAN), Archbishop of Canterbury in the reign of HENRY V., enjoined that the barbers of London should close their shops on Sundays. On July 24th, 1413, the Primate of All England addressed certain letters to the Lord Mayor and aldermen of the city of London. After telling them that he knew that they sought for the things which were above and that they would on that account readily incline to carry out things which tended to the observance of the Divine law, he intimated that when he was lately presiding at the Provincial Council in London with the Suffragan Bishops and the clergy of the province of Canterbury it was made known to them with universal reprobation that the barbers of the city of London (being without zeal for the law of GOD and not perceiving how that the Lord had blessed the seventh day and made it holy and commanded that it should be observed by no abusive pursuit or servile occupations but rather by a disuse thereof) in their blindness kept their houses and shops patent and open on the seventh day, the Lord's Day namely; and that they followed their craft on the same just as busily as on any other day in the week customary for such work. With the assent of the Suffragans and clergy the Archbishop determined that there must be made a solemn prohibition of the practice, and in future barbers were to be enjoined not to keep their houses open or to follow their craft on the Lord's Day on pain of the greater excommunication. The Archbishop proceeded to say that as the malice of men had increased, a thing to be deplored, temporal punishment was held more in dread than clerical and that which touched the body or purse more than that which killed the soul; he therefore heartily entreated them for the love of GOD and of His law and, moreover, he required and exhorted them, that they should take counsel on the matter and ordain a competent penalty in money to be levied for the chamber of the City or such other purpose as they should think fit upon the barbers who transgressed in future, conceiving that in this way those who did not fear the anger of GOD would be restrained by a scourge inflicted upon their purse.

It should be added that the ordinances formulated by the barbers themselves in the middle ages forbade in the strictest possible terms the shaving of customers on Sundays, while records of the punishment of transgressors in this respect show that the prohibition was continually being enforced, and this during the reigns of the immediate predecessors of King CHARLES II. It cannot therefore be suggested that barbers were intentionally excluded from the provisions of the Lord's Day Observance Act on account of any unwillingness to impose a novel restriction upon them. Nor apparently can they have been exempted on account of any importance of their calling derived from its former connexion with surgery. In support of this alleged connexion the privilege to let blood was referred to. Unfortunately for this argument, the Act of HENRY VIII. which united barbers and surgeons in one company expressly forbade, in London at all events, that barbers should let blood or do any act of surgery except draw teeth, while at the same time, in compensation, surgeons were precluded from shaving their customers. If this was the law in London in the days of HENRY VIII. we doubt whether even in country districts blood-letting was performed as a rule by barbers in the days of CHARLES II.; at any rate we question whether their functions gave them any kind of status akin to that of surgeons, but we have not found any records bearing directly on this point. It seems to us that, however commendable the decision of the Divisional Court may be on account of its ingenuity or its expediency, and however interesting it may be to recall the once intimate relations between barbery and surgery, the present freedom of the barber to break the fourth commandment can hardly be regarded as the revival of an ancient liberty accorded to science by our forefathers.

Annotations.

"Ne quid nimis."

GARBAGE-MONGERS.

AN unusually hideous instance of the crime of garbage-mongering was brought to light at Marlborough-street Police-court on Jan. 31st and the offender, a man named Stoppani, received a salutary sentence of three months' imprisonment with hard labour. About two tons of stuff in various stages of putrefaction were seized on

his premises which were apparently destined to be sold to keepers of cheap restaurants, a detail which brought from the magistrate a reminiscence of how a cosmopolitan waiter had once told him that in no place in Europe was such cheap living to be obtained as in the neighbourhood of Leicester-square. The two tons chiefly consisted of "blown" tins of preserved food of various kinds, many of which had been pricked and re-soldered after the escape of the accumulated gases, but three hundredweight of bacon in an advanced state of putrefaction showed that this enterprising merchant did not confine himself to tinned provisions. It was further proved that he had bought for a sovereign from a wholesale firm a quantity of tinned goods which, if sound, would have been worth about £30, but which had been "thrown away to be removed for the purpose of being converted into manure," and were invoiced to the buyer by the seller as defective and not fit for human food. With regard to this we are aware of no process by which tins of preserved asparagus, milk, or sardines, can profitably be converted into any form of agricultural fertiliser, and we must point out that neither the selling of such goods with notice of their condition to the purchaser nor the throwing of them away to be removed by the dust-collector protects the poorer sections of the public against the future retailing of them as articles of diet. The wholesale firm seems to have safeguarded their position by informing the miscreant buying the garbage from them that what they were selling was unfit for human consumption, of which he must have been fully aware. They do not seem to have troubled themselves to wonder for what other purpose such filth could possibly be thought worth buying at the price given; but even if as an alternative the stuff had been left where it was it would have been a temptation to many persons who might have been in a position to abstract portions of it, either for consumption in their own families or to be retailed among their humble neighbours. At Clerkenwell upon the same day Ebenezer Durman, a grocer of Whitecross-street, St. Luke's, was summoned by the St. Luke's Vestry for having deposited for the purposes of sale 135 tins of salmon, 211 tins of condensed milk, 235 tins of sardines, 15 tins of corned beef, three jars of pickles, 5 lb. of figs, 78¼ lb. of dates, and 14½ lb. of prunes, which were unsound and unfit for human consumption. Sanitary Inspector Adams proved seizing the goods in the defendant's store-cellar. He at first denied having any "blown" tins but afterwards said that they must have been overlooked. The defence was that the stuff was a collection made by the last tenant from whom the defendant had bought the business, and that the milk had been bought from a broker so that the defendant had to run risks of this sort. (It is curious to note how unfortunate persons of the defendant's stamp are in their business relations.) The magistrate was most unsympathetic and fined the defendant £50.

LONDON STREETS AND THE VESTRIES.

MANY of the inhabitants of London suffered a considerable amount of personal inconvenience from the slight fall of snow which took place on Friday, Feb. 2nd. Formerly it was the duty of every householder to remove the snow from the pavement in front of his own house, and as a general rule the work was quickly and thoroughly carried out. At that time people who were needy and out of work promptly tried to make bargains with the various householders to do the work in return for some small amount of ready money. Under the provisions of the Public Health (London) Act of 1891[1] the duty of cleansing the pavements as well as the streets devolved on the vestries. It is extremely discreditable to some of these bodies that they should show so much apathy in carrying out the statutory duties committed to them. In some parts of London the snow was removed from the pavements on Saturday, the morning following the snowstorm, but in some parts—for example, in many streets in Kensington—the snow was still lying thickly on the pavements in the afternoon of Sunday, and the vestries were apparently taking no steps whatever to get rid of the nuisance. It is a matter of common knowledge that it is an unwholesome and frequently a dangerous thing for people to spend a prolonged time with their feet wet, and it is to be feared that not a few of those who attended places of worship on Sunday must have sat for hours not only in discomfort but in peril of the maladies, not all of them trivial, in the causation of which wet feet play a part. It is impossible to suppose that the vestries of London would have any real difficulty in making arrangements for having the snow cleared from all the pavements under their charge in a very short space of time. Such arrangements must, of course, be made in advance, and we commend the question to the important bodies who have resting on their shoulders the care of the health of the people of London. Many local authorities appear to have a great desire to have the sphere of their labours enlarged, but if they will first carry out thoroughly the duties committed to their charge they can ask for greater responsibilities with more confidence.

[1] 54 & 55 Vict., Cap. 76, Sec. 29.

THE HIGHER STAGES OF SEXUAL EVOLUTION.

DR. CHARLES FÉRÉ of Paris, who has given us much valuable information on the subject of the physiology and pathology of the emotions, has published an article[1] dealing with the sexual instinct in its higher phases which must command attention. His paper is an argument for the repression of the brutal instincts in man and an insistence that they should not, even in the relations of marital life, play too naked and unrestrained a part and thereby afford a cause for danger to the sexual life. He points out that this danger is more likely to influence the sexual life of the woman owing to her relative ignorance and passivity. The common and, in Dr. Féré's opinion, widespread teaching that sexual indulgence is a necessity, a *sine quâ non* of healthy life, is not accepted as sound doctrine. Indeed, Dr. Féré goes so far as to assert and to adduce proofs to the effect that such teaching is mischievous; that the sexual instinct is not inborn but is acquired mainly through precept and example; and that the instinct which is at present being perfected and perpetuated by evolution is the parental instinct. A review of facts in the life-history of the lower organisms serves to show that among them the male (or less frequently the female) dies after the accomplishment of the sexual act. This shows the irresistible strength of the sexual impulse and demonstrates the potency of the instinct of propagation. At a higher stage of evolution we meet with those phases of sexual life and conduct in many birds and mammals in which a more restricted and restrained manifestation of sexual acts and needs constitutes a notable feature. In savages there appears what is practically a new phenomenon—viz., the practice of infanticide which is followed in order to avoid the natural consequences of sexual indulgence. A further departure from the normal is seen when sexual gratification is regarded both as a means and an end in itself and abortion is resorted to in order to avoid the responsibilities of marriage. This last phenomenon bears within itself a peculiarly pernicious element, a mode of thought and feeling which is fatal to the best instincts of the race. Dr. Féré touches upon the gravity of this aspect of the problem and the profound weakness which it is likely to entail on nations among whom

[1] Revue de Médecine, No. 10, 1899.

fœticide is prevalent. He enjoins the wisdom and healthfulness of sexual chastity and temperance in both marital and extra-marital life, and points out the benefits resulting from the begetting of a moderate number of children who will be able to receive the advantages of education and of high ideals, which are denied to those whose parents are handicapped by the excessive cares and anxieties of too large families. Dr. Féré concludes by expressing a strong opinion that this is the aim and ideal to be striven after in the present stage of our sexual evolution.

A TESTIMONIAL TO DR. NEALE OF THE "DIGEST."

WE publish in another column an appeal signed by leading members of our profession on behalf of an object which we are sure will meet with the universal approval of our medical brethren. The suggestion is that Dr. Neale, the compiler of the well-known and invaluable "Digest," should be presented with a testimonial "as a recognition by his professional brethren of his long-continued and invaluable labours on their behalf." To ourselves as medical journalists the value of the "Medical Digest" is incalculable, and we take it that every medical man writing upon any professional subject refers to the same work to find out what has been said upon his subject previously. Dr. Neale has spared neither time nor money in the prosecution of his work, and we most earnestly hope that his colleagues in the profession will show their sense of his unselfish toil upon their behalf.

THE BATLEY TYPHOID OUTBREAK.

AT the quarterly meeting of the Batley Town Council on Thursday last serious complaints were made against the Sanitary Committee regarding an outbreak of typhoid fever which has recently occurred in Batley and which some members of the council believe to be connected with a certain milk-supply. The proceedings of the council as reported in the local newspaper are not particularly instructive reading, but they serve to exemplify the inability of the average municipal mind to grasp the true bearing of medical problems. Alderman Nettleton, after reading an extract from the report of the medical officer of health, which, however, contained no reference to the subject, is said to have remarked that recently there had been a "scare" in the town respecting an outbreak of typhoid fever. That the outbreak was discovered before it had become widely diffused appears to have been entirely due to the prompt notification of first cases by medical men in the town, and for this we should have thought the council would have acknowledged their indebtedness to the profession. The worthy alderman, however, thought differently. "All the doctors in the town," Mr. Nettleton is reported by a local newspaper to have said, "were doing their best to detect cases of zymotic disease, but at the same time he was rather afraid that some of them were rather too anxious to notify them. If the doctors would only allow the suspected cases to remain a few days longer at home some would, he thought, turn out to be cases of another character." In the best interests of the people of Batley we sincerely hope that the opinion above expressed is not generally shared by the members of the Sanitary Committee. It should be remembered that the diagnosis of typhoid fever, in its early stages at any rate, is exceptionally difficult, and for this reason every encouragement should be given to medical men to notify promptly, so that suitable measures may be taken to isolate first cases, and thus to check the spread of the disease at the outset. If the first few cases are allowed to remain undetected it is impossible to estimate the mischief that may eventually accrue; and we are appalled to think that an alderman of the council, albeit on the very eve of his appointment as governor to a great educational institution in the town, could be found to advocate a proceeding which, if carried into effect, would be fraught with serious danger to the community. We regret to add that, according to the *Batley Reporter*, Mr. Nettleton in a subsequent speech thought it becoming to remark that "the typhoid epidemic was simply a scare which had been raised by some of the gentlemen in the medical profession." We are sure that on reflection the alderman will recognise with us the injustice of this aspersion, and we trust that he will take an early opportunity of apologising to the medical gentlemen of the neighbourhood, who seem to have acted skilfully and promptly for the preservation of the public health of Batley.

COCKLE-BORNE ENTERIC FEVER.

A LETTER from the ex-Lord Mayor of Belfast upon a subject of the deepest interest will be found on p. 421. The diffusion of enteric fever by means of oysters, cockles, and other shell-fish has often been the subject of comment in our columns and in our issue of Oct. 21st, 1899 (p. 1109), the matter was discussed with reference to an outbreak of enteric fever at Exeter, the source of which was virtually traced to the consumption of raw cockles. We referred to the difficulties incident upon the attempt to get any Bill dealing sufficiently with this subject through Parliament. While waiting for this desired result we can only reiterate our former advice that people must be careful as to the source from whence they procure cockles, and in case of the slightest suspicion we would strongly advise them not to eat these dainties unless previously boiled. It is important also to point out that the question has been raised as to whether the several processes by which cockles are "boiled" or "cooked" are sufficient to destroy pathogenic bacilli present between the valves of these molluscs, and we have reason to believe that this matter is at the present time engaging the attention of the Medical Department of the Local Government Board.

PRECOCIOUS DEMENTIA.

DR. CHRISTIAN of Charenton has contributed to the *Annales Médico-Psychologiques* for 1899 a series of articles on this subject which are well worth reading. His study comprises the clinical and life histories of 35 cases, and includes a valuable historical account. He points out that both Pinel and Esquirol regarded this affection as a form of idiocy, and that it was reserved for Morel of Belgium to show its precise significance. More recent authors have named this disease hebephrenia or dementia præcox. Dr. Christian states that this affection is much more frequent than is usually supposed, and that he has met with 100 cases of it during 19 years. The characteristic symptoms are as follows: its appearance at the period of puberty, the variable delusions at the onset and in the early stage, the constant and sudden impulses, and the rapid termination of the attack by a condition of mental weakness more or less pronounced. Three periods exist—viz., the period of incubation, the period of delusions and confusion, and the period of mental enfeeblement (terminal period). Prodromal symptoms may be absent or may show themselves in a vague form, such as fatigue or inaptitude for work. Later there appears with more or less suddenness the mental disease in its characteristic form—e.g., maniacal excitement, melancholia, mental confusion, or delusions of a hallucinatory or hypochondriacal nature. The patient passes now into the third stage, and it is remarkable how quickly this may attain its culminating point. Certain hebephreniacs remain on the borders of imbecility, others fall almost from the beginning into a condition of profound stupidity. In the lighter forms of hebephrenia the patient may exhibit only a slight mental

enfeeblement which does not prevent his fulfilling the duties of ordinary social life. In the graver forms a more profound mental involvement persists and the patient passes into cataleptic and catatonic conditions and is liable to suffer from impulses. The differential diagnosis from acute mental confusion, from stupor, and from epileptic or alcoholic insanity is very difficult at the onset. The disease makes its appearance between the ages of 15 and 25 years. Dr. Christian does not accept or admit the almost exclusive influence of heredity or of degeneration which so many authors invoke as the main causal factor. He accords the position of first importance to debilitating causes, above all to over-exertion (*surmenage*), and contends that though the affection is at present relatively rarer in the female than in the male this disparity is already tending to disappear. He looks upon puberty as a contributory condition which facilitates the production of the disease.

THE BUCKLAND FISH MUSEUM.

IN our issue of Jan. 21st, 1899, we commented upon the fact that a select committee had recommended that this museum should be abolished and that many fishery boards and prominent fishermen had prepared a memorial to the Lord President of the Council and the President of the Board of Trade protesting against such a decision. On Feb. 5th the two Ministers concerned received a deputation who presented the memorial. The memorial called to mind the inception of the museum by the late Frank Buckland and asked for the maintenance and exhibition of the museum as being an institution in the interests of the sea and river fisheries of the United Kingdom. The reply was of the usual stereotyped official order. The Duke of Devonshire said that it appeared to him that the matter was one which more concerned the Board of Trade than the Education Department, and the President of the Board of Trade said that his department could not move in the matter without the assistance of the Treasury. He hoped, however, that the result of the deputation might be a careful inquiry into all matters connected with the museum and that they might be able to come to some conclusions satisfactory to the deputation and to all interested in the culture of fish. So the matter stands for the present, but it is obvious that something should be done to preserve the museum as a step towards using properly the unrivalled resources of the British sea and river fisheries as food for the people.

PHYSICAL TRAINING IN SCHOOLS.

A CIRCULAR has been issued by the Scottish Education Department to school boards and managers of schools upon the importance of physical exercise and military drill being taught in such schools. The circular says:—

Lord Balfour is convinced that such exercises, apart from any other consideration, would be a most important aid in attaining some substantial objects at which all education must aim. Not only do they tend to improve manual dexterity and to render more alert the faculties of observation, but they are also pre-eminently useful in developing those habits of comradeship, of responsibility, and of individual resource which are of supreme importance, not only to the nation as a whole, but to the individual pupil. Indirectly they bring the individual into contact with the principles which lie at the foundation of national defence, and they bring home to him his duties and responsibilities as a citizen of the Empire, while at the same time giving him an opportunity of strengthening and developing his physical powers and rendering him more fit for his ordinary employment. Whatever form the military service of our country may hereafter assume it is evident that the strength and security of the Empire as a whole as well as that of every individual citizen must depend upon the extent to which the moral elements of responsibility, duty, and readiness of judgment, along with the physical capacities, may be developed. Success in this can only be achieved by careful consideration of the best methods and by employing these strenuously and zealously during school life. Attention to physical training becomes all the more urgent owing to the tendency of population to gather to the larger towns, where the opportunities for physical exercises are necessarily restricted.

These are weighty words and absolutely true. There is nothing which is so likely to develop habits of honesty, independence in action, and at the same time unselfishness as the usual forms of physical exercise. A man must not play for his own hand if he wishes to win a game at football or cricket, and to be a unit in a corps is an object-lesson for an egotist. This is the training which far more than book learning is the strength of our public-school education, and similarly the want of it is the defect in most elementary schools. The circular goes on to say that enormous good might be done by the formation of cadet corps among those who have just left school, which corps would be arranged for by the school managers in combination with local associations of public spirited inhabitants. In seaboard parishes nautical training should be developed. We wish the movement every success for we are convinced that it proceeds upon the right lines.

INTERNATIONAL CONGRESS OF MEDICINE, PARIS, AUGUST, 1900.

THE Paris executive of the International Medical Congress have issued a notice to the effect that at the request of the French Society of Electrotherapy and Radiology, the International Congress of Medical Electrology and Radiology is to be held in connexion with the International Congress of 1900. A commission composed of M. Weiss, professor of the University of Paris, President; MM. Apostoli and Oudin, Vice-Presidents; M. Doumer, professor at the University of Lille, general secretary; M. Meutier, secretary; M. Boisseau du Rocher, treasurer; and M. Bergonie, professor at the University of Bordeaux, M. Bouchacourt, M. Branly, professor of the Catholic Institute of Paris, and other distinguished medical men in Paris have been asked to assure its organisation. This Congress will take place in Paris from July 27th to August 1st, 1900. All inquiries for further information should be forwarded to Professor E. Doumer, general secretary, 57, Rue Nicolas Leblanc, Lille. Notices of intention to join the Congress are to be sent to Dr. Meutier, 11, Rue de Miromesnil, Paris.

TUMOURS OF THE CAUDA EQUINA.

DR. B. SACHS[1] records two cases of tumour pressing upon the cauda equina successfully located by diagnosis and removed by operation. Case 1 was that of a man, aged 56 years, who had suffered for 18 months from severe pain in the right thigh and leg and subsequently had sudden severe cramps of the muscles of the thigh. He had been previously wounded by a bullet in the Civil War, the missile passing obliquely through the upper part of both thighs. The pains from which he now suffered were suspected to arise from the old wounds caused by the bullet and anti-neuralgic treatment was tried but without success. The muscles of the limbs were somewhat wasted, but whether this could be attributed to the present disease (of the cauda equina) or to the old bullet injury received 35 years previously was not certain. The spinal column was sensitive to pressure along its length and deep pressure upon the spinous processes of the second and third lumbar vertebræ produced some pain. Light pressure at a spot about an inch to the left of these vertebræ gave rise to pain radiating and darting down the lower limb exactly like pain experienced at other times. The left knee-jerk was normal but the right was absent. There was neither

[1] New York Medical Record, Jan. 6th, 1900.

ankle-clonus nor tendo Achillis jerk. The cremasteric reflex was greatly increased on the left side, but all other reflexes (superficial and deep) appeared to be normal. The vesical and anal reflexes were present and unimpaired. The diagnosis of a new growth was rendered probable by the assemblage of symptoms and, owing to the absence of rectal and vesical disturbance and by reason of the unilateral character of the symptoms, the lesion was regarded as affecting the cauda equina rather than the lumbar part of the spinal cord itself. Operation (laminectomy) was performed by Dr. Wyeth, and on dissecting away the muscles from the median line from the third lumbar vertebra upwards, a bulging tumour was observed on the left side of the cauda between the levels of the second and third lumbar vertebræ. The growth was adherent to the dura mater and to the bones, but it was separated and removed without injury to the spinal nerves. The patient made an excellent recovery and was free from pain, cramps, and all other distressing symptoms, and was able to walk with comfort. Microscopic examination showed the growth to be an alveolar sarcoma. Case 2 was that of a man, aged 32 years, who had suffered from shooting pains in the back and legs for a year. The pains increased in frequency and severity and muscular power was diminished in both lower extremities, the left leg being the weaker, while locomotion was difficult. The knee-jerks were absent and the right plantar reflex was abolished. The tendo Achillis reflexes were wanting on both sides. Sensation appeared to be normal except for a distinct diminution of sensation on the dorsal aspect of the left thigh and the left half of the perineum, scrotum, and penis. The vesical and rectal reflexes were rather weak. The pupils were equal and reacted normally. At first tabes dorsalis was suspected, but treatment by suspension and by the iodides produced no improvement. The slow progress and localisation of the symptoms pointed to an involvement of the lower portion of the spinal axis of markedly unilateral character. Laminectomy was performed by Dr. Gerster at the second and third lumbar vertebræ. A soft gelatinous elastic tumour, pale and nodular, was found to be compressing the cauda equina between the second and fourth lumbar vertebræ. This was removed and the patient made a good recovery. Microscopic examination showed the growth to be a fibro-sarcoma.

A COUNTY INEBRIATES ACT BOARD.

A CONFERENCE was held recently in the County Hall, Preston, of representatives of the county council, county boroughs, and non-county boroughs of Lancashire for the purpose of promoting a Bill in the present session of Parliament to constitute an Inebriates Act Board for the County Palatine of Lancaster and for other purposes. The Right Hon. J. T. Hibbert presided and there was a large attendance. The chairman explained the importance of the subject and expressed the opinion that the movement should be put on a firm and satisfactory basis. He regretted that they had lost so much time in dealing with the subject. The town of Oldham had not seen its way to join this combination, and unless Oldham were ready and willing to establish a home of its own the town would be lacking in a very important duty towards its citizens, for no one would believe that a manufacturing town of such a size was without its inebriates who require efficient and judicious treatment. It was announced that Mr. Clare, the newly appointed clerk to the Lancashire County Council and formerly the town clerk of Liverpool, had drafted a Bill to be promoted in the present session of Parliament by the County Council to authorise the formation of a joint board. The conference considered the clauses in detail. The preamble of the Bill, which was adopted, stated that under Section 9 of the Inebriates Act, 1898, the council of any county or borough were empowered to contribute towards, or to undertake themselves, the establishment or maintenance of an inebriate reformatory, and to combine with another council or councils for any such purpose. Any borough or county council might contribute towards the establishment or maintenance of a retreat, and two or more might combine. There is no doubt that this is a wise and important step towards the carrying out of the Inebriates Act of 1898, and it is to be hoped that other public bodies will follow the example of this combination in Lancashire, for it is only by such combinations being formed that efficient and satisfactory reformatories can be established.

STREET NOISES.

ON Feb. 6th the London County Council passed the following by-law: "No person shall for the purpose of hawking, selling or advertising any newspaper call or shout in any street so as to cause annoyance to the inhabitants of the neighbourhood." The penalty provided is a fine of 40*s*. We congratulate the Council most warmly upon having taken this step. The nuisance caused by, for example, newspaper yellers is unendurable. As we have said over and over again, there are hundreds of newspaper sellers who do not shout and who make a living; and Mr. Frank Smith, who is reported as saying that the new by-law would take away the living of hundreds of men and boys, is suffering from perfectly groundless fears. The continual howling of "Winner" is bad enough, but this is as nothing compared to the bellowing of "Awful slaughter" or "Great British victory" to which we have been nightly subjected since the war began. We believe the law will not come into operation for some days, but we hope that when the period of grace has expired the police will see to it that it does not remain a dead letter.

AUGUSTE COMTE: A STUDY IN MENTAL PATHOLOGY.

DR. W. W. IRELAND contributes to the pages of the *Journal of Mental Science* (January, 1900) an interesting study and critique devoted to the mental life and history of Auguste Comte. The mental aberrations of that philosopher were previously made known by his friend and biographer, M. Littré, and more recently by Dr. G. Dumas in three articles filling 87 pages of the *Revue Philosophique* (vol. xlv. 1898). Comte was of delicate health and suffered from a weak digestion in youth. At the age of 27 years he married Caroline Massin, a lady subsequently known to have been a person of loose morals, and their domestic life was far from happy. She ultimately quitted his house to live with a lover. Dumas tells us that Comte's wife deceived him, was unfaithful to him, "and made his home-life hard and jangling." Domestic and wordly troubles conspired to bring about a breakdown in the philosopher's mental health. "I have often conceived thoughts of suicide," he subsequently wrote, "and should have probably yielded to them had the bitterness of my domestic life not been neutralised by the increasing consciousness of my social mission." Twice he made attempts to drown himself but was rescued. He plunged into excessive mental work and signed his register of marriage with the words "Brutus Bonaparte" appended to his name. For two years, while suffering from melancholia with suicidal impulses, he was under the treatment of the famous mental physician Esquirol. He suffered much from sleeplessness, irritability of temper, and repeatedly from "nervous crises," one of which occurred in 1838, another in 1842, and a third in 1845. Two years after his separation from his wife he met and conceived a violent

passion for Madame Clotilde de Vaux. His affection was reciprocated, but after a brief courtship the lady died a victim to consumption. In a letter to Madame Comte, from whom he had been separated some time, he recounts the death of this lady who had become "his eternal colleague and his veritable spouse." "This attachment," observes Dr. Ireland, "had brought out the affective and sentimental side of his character ..... and the influence of this passion modified in many respects the character of his speculation. His political philosophy showed a great falling off, which his enemies ridiculed, his more critical admirers deplored, and scarcely any of his disciples entirely followed." For about 20 years he abstained from reading the newspapers and even scientific periodicals. He only read a few favourite poets. Thus while preparing schemes for the salvation of society he would not feel the pulse of the world. He declared that all scientific pursuits should be treated as idle waste of time if they could not be proved to have a direct bearing upon the welfare of humanity. "All books were to be destroyed save about 100, and all animals and plants thought useless to man were to be extirpated." Comte, in his later days, was a victim of hallucinations in the course of which he had visions of Clotilde. His thoughts were saturated with a crude mysticism at this time; he set up in his imagination three guardian angels, Madame Clotilde de Vaux, his mother, and a young woman who was his cook. Comte, having suffered from more than one attack of recurrent insanity, remained for the rest of his life thereafter a "neuropath," and died in 1857 at the age of 60 years.

THE MEDICAL CHARITIES OF MANCHESTER.

A PAPER recently read before the Manchester Statistical Society by Mr. F. Brocklehurst gives some interesting details as to the charitable institutions dispensing medical aid which exist in Manchester and its suburbs. The paper was written upon details supplied by the report of the local Hospital Saturday and Sunday Funds, and in all 20 medical charities were considered. Mr. Brocklehurst pointed out that the information contained in the various reports is "of an uncertain and perplexing character. Few of them give any idea of the number of beds contained therein and fewer still of the cost per patient treated. Their methods of bookkeeping are as varied as their auditors." Mr. Brocklehurst, however, wished it to be understood that in referring to "irregularities" he did not mean in the least to suggest that the accounts were kept in anything but the most scrupulously honest fashion. The grand total of patients amounted to 217,527, but allowing for double and treble entries Mr. Brocklehurst considered that a total of 150,000 patients was annually dealt with. Only six or possibly seven of the charities give any information as to where the patients come from. Financially many of the institutions carry on their work "while standing on the verge of chronic insolvency." It is satisfactory to find that Mr. Brocklehurst came to the conclusion that instances of hospital abuse were very few and far between. Two evils, however, were very apparent and these were the amount of overlapping and waste of time of the medical men. For the former evil he suggested that the chronic cases might well be transferred to the provident dispensaries. For the latter evil he referred to the scheme put forward by himself some two years ago of a medical clearing house.[1] He asked if it were "not possible to establish in the centre of Manchester a receiving house and an out-patients' department from which, as from a centre, cases of sickness could be transferred to the special hospital provided for them." Such a plan, says our special correspondent in Manchester, might be feasible in Manchester and would be well worth trying. But its execution would entail something of the nature of a central hospital board, and such a board even in an embryo condition would probably be the cause of much heart-burning and jealousy among the various institutions. Many hospitals, to say nothing of other charitable institutions, live firstly by appeals *ad misericordiam* in which they give details of crushing loads of debt and, secondly, by putting forward lists of the number of persons benefited. The more numerous this first list is the more worthy is the charity in the eyes of the unthinking almsgiver. These two incentives to irresponsible giving would probably be done away with by the carrying out of Mr. Brocklehurst's scheme, and in whatever town it was adopted some of the smaller charities would disappear. Probably in the end this would be a good thing, but the process of extinction would be by no means painless and might do harm.

[1] THE LANCET, July 23rd, 1898, p. 220.

FURTHER EXPERIMENTAL EVIDENCE REGARDING THE VALUE OF TUBERCULIN AS A TEST FOR TUBERCULOSIS.

THE Technical Instruction Committee of the Cheshire County Council have recently carried out a most important series of experiments with tuberculin, their object being to form a decision for themselves upon the following points: 1. To test the reliability or otherwise of tuberculin as a means of diagnosis for tuberculosis in cattle. 2. To see in what percentage the milk of those reacting contained tubercle bacilli. 3. To estimate the direct loss that would be incurred by a farmer in clearing his herd of all infected animals. 4. To see if the appearance and manipulation of the udder could be relied upon as indicating the presence of tuberculous milk. 5. To observe the effect of regular and systematic injections of tuberculin particularly in regard to the future reactions and as to whether any curative property was shown; also as to whether the injection of tuberculin would propagate the disease in animals not already tuberculous. The testing was done by Mr. Laithwood, F.R.C.V.S., chief veterinary inspector to the county of Cheshire, the post-mortem examinations being made by the same gentleman assisted by Mr. King, chief veterinary inspector to the corporation of Manchester, and Mr. Storrar, veterinary inspector to the city of Chester. Professor Delépine of Owens College undertook the microscopical examination and analyses of the milk of all reacting animals and of portions of the carcase where doubt existed. Two herds, one at the Dairy Institute, Worleston, consisting of 52 cows and two pedigree shorthorn bulls, and the other at the Agricultural School, Holmes Chapel, consisting of 16 cows and one pedigree shorthorn bull (two years and nine months old), were tested. The tuberculin was prepared by Professor McFadyean of the Royal Veterinary College. As the result 50 animals were declared free from tuberculosis, 17 were declared infected, and four doubtful. The udders of those that reacted were carefully examined, only one being found indurated; examinations of the milk of these were made by Professor Delépine and tubercle bacilli were detected in one instance only. Two out of the three bulls were found to be tuberculous the oldest one being badly affected. 10 of the animals were slaughtered the result in every case verifying the conclusions drawn from the reaction. Nine cows were isolated and submitted to repeated injections of tuberculin at certain intervals, the cattle being afterwards slaughtered and examined. With reference to these the conclusion arrived at was "that continuous injections of tuberculin at short periods of time will cause reaction to cease in an animal that has previously been shown to be tuberculous." It was pointed

out that on this account tuberculin might be put to dishonest uses and that therefore stringent restrictions ought to be placed upon its sale, only duly accredited persons being allowed to purchase it. As regards the "curative" property of tuberculin it was considered that none of the experiments gave encouraging evidence. Although the experiments traversed ground which is now fairly well trodden they are of great value in confirming what has already been done to prove the diagnostic reliability of tuberculin and in bringing the position of modern knowledge under the eyes of the Cheshire agricultural community.

THE MEDICAL DIRECTORY: THE DISTRIBUTION OF THE MEDICAL PROFESSION.

THE *Medical Directory* for the year 1900 has just appeared, the issue of this invaluable work of reference having been delayed on account of a fire which occurred at the printers' establishment towards the end of last year. The total number of practitioners for 1900 is 35,651, an increase of 657 over the total for 1899, which was 34,994. This, at least, was the total given in the 1899 edition, although in the tabulated statement published in the 1900 edition the total for 1899 is given as 35,117, and hence the increase for 1900 is only 534, but the discrepancy probably arises from the taking in of those qualified during 1899. Continuing the comparison of figures for the two years 1899 and 1900 and taking as our authority the tables in the 1899 and 1900 edition it is possible that decentralisation is proceeding. This is a movement which has long been prophesied as about to happen, and it may ha ve begun though the figures are not conclusive. The figures for London in 1899 were 6117; in 1900 they are 6102. Provincial England for 1899 showed 15,497; in 1900 the figures are 15,794. For Wales the figures in 1899 were 1100; in 1900 they rise to 1127. Scotland in 1899 had 3394 practitioners and in 1900 has 3462. Ireland in 1899 possessed 2551 and in 1900 the figure is 2559. Practitioners living abroad in 1899 numbered 3795, and in 1900 their total is 3875. The services in 1899 mustered 2528 medical members and in 1900 the list rises to 2705. The "too late list" for 1899 numbered 12, and in 1900 rises to 27. We are glad to see that an alphabetical arrangement has been adopted for the list of the hospitals.

TUMOUR OF THE PITUITARY GLAND.

S. PECHKRANZ[1] contributes a paper on the above and gives an account of clinical observations made throughout the history of the case from the first onset of symptoms two and a half years before death. The patient, a young man, aged 27 years, suffered at first from troubles which were supposed to be of renal origin and of a uræmic nature, but the absence of œdema and of urinary indications negatived this view. Both syphilis and tuberculosis could also be excluded. He suffered from headache, and this was followed by troubles of vision in the course of which one eye became completely blind while the other was simultaneously affected with hemianopsia. At a slightly later stage there developed a double optic atrophy. The two oculo-motor nerves were next attacked and an almost complete ophthalmoplegia (internal and external) followed. There was no involvement of any other sense, and there was complete freedom from localised paralysis or convulsions. A diagnosis of neoplasm at the base of the brain affecting the optic chiasma was made. The necropsy revealed the following conditions. The pituitary gland was replaced by a large tumour, no part of which was adherent except to a spot at the back of the sella turcica. The tumour was composed of three parts, the chief of which occupied the sella. Prolongations from this passed forwards into the orbital cavities and its dorsal part projected into the third ventricle between the cerebral peduncles. Small nodules of growth were situated around the margins of the tumour and the whole mass was encapsuled in a tough membrane like the dura mater. There was no remnant of the pituitary gland. The tumour was a sarcoma. The cerebral substance in contact with its margins showed a slight degree of local softening, and a portion of the neoplasm itself had undergone softening as the result of a hyaline degeneration of its vessels. In the course of its growth forwards it involved the optic chiasma slightly, more on one side than the other; hence the amaurosis on the one side, combined with hemianopsia on the other side. As the growth continued to increase the involvement of the other optic nerve was complete and hence total blindness resulted. It is interesting to record that the patient showed a moderate degree of hypertrophy of the feet and hands and of the face, the augmentation of volume in these organs producing an appearance like that of acromegaly. The enlargement was practically limited to the soft parts, the bones apparently not suffering enlargement. The patient had a feminine type of skeleton and the sexual organs showed insufficient development (hypoplasia). Pechkranz thinks that the patient had a congenital anomaly in the structure of his pituitary body and regards the condition of the skeleton, of the sexual organs, and finally of the hands, face, and feet as associated with the abnormal condition and eventual destruction of the pituitary body.

[1] Neurologisches Centralblatt, No. 18, 1899.

THE VALUE OF BACTERIOLOGICAL EXAMINATIONS TO THE COMMUNITY.

AT the last meeting of the Lambeth Vestry on Thursday night the medical officer of health, Dr. Joseph Priestley, presented a report made to the Sanitary Committee showing the result of the first year's working of the bacteriological laboratory recently established by the vestry. Bacteriological outfits were supplied to medical practitioners in the parish and examinations made free of charge. A total of 388 examinations were made during the year. 214 examinations were made in suspected cases of diphtheria; the true diphtheria germs were found in 99. In 81 cases of suspected typhoid fever, 43 gave the Widal or typhoid reaction. That is to say that bacteriology determined the diagnosis in 46 per cent. of suspected cases of diphtheria and 53 per cent. of suspected cases of typhoid fever. Dr. Priestley in his report concluded that there was thus a saving in notification fees sufficient to justify the provision of the bacteriological laboratory.

SPLENIC ANÆMIA COMPLICATED BY DIABETES MELLITUS.

IN the *Journal of the American Medical Association*, Dec. 30th, 1899, Dr. H. A. Hare has published a case of splenic anæmia complicated by diabetes mellitus which appears to be the only one on record. Splenic anæmia is still a comparatively new disease and only a limited number of cases have been recorded,[1] so that it is impossible to say whether this association is common or not. Whether in the case in question there was any connexion between the two conditions Dr. Hare cannot state. The patient was a man, aged 24 years, who was admitted to hospital in 1895. He complained that in July he had begun to suffer from severe pain beneath the left clavicle which extended downwards into the left hypochondrium. He was exceedingly pale; his conjunctivæ were yellow and his spleen was enormous. There were hæmorrhages into both retinæ. In the blood there was a great excess of

[1] THE LANCET, Jan. 13th, 1900, p. 115.

lymphocytes, but the total number of leucocytes was about normal. For a period of two years the leucocytes varied from 8000 to 4000, usually averaging about 6000. In December the lymphocytes were 84 per cent., mononuclear cells 4, polynuclear 8, and eosinophiles 3. The red corpuscles varied from 1,000,000 to 2,800,000. In February, 1898, attacks of epistaxis began; the temperature and urine were normal, the hæmoglobin was 40 per cent., the red corpuscles 1,620,000, and the white corpuscles 7000. At the beginning of November polyuria suddenly began; he passed 10 quarts of urine in the 24 hours, containing 30 grains of sugar to the ounce. Previously to this attack he was gaining weight and working in a barber's shop where he was on his feet from 7 A.M. to 9 P.M. He improved under rest, good food, and large doses of arsenic.

ON Saturday, Feb. 3rd, the county council of Salop elected Mr. Charles Porter, M.D. R.U.I., Barrister-at-law, to succeed the late Dr. W. N. Thursfield as medical officer of health for the county. Dr. Porter brings to the duties of this important office an experience gained first in East Kent and latterly in the county borough of Stockport where he has initiated and carried through many and varied sanitary improvements. His vigorous action at Stockport, when the lay officials, both central and local, of the St. John Ambulance Association seemed unable to realise how much their Association depended upon the assistance of medical men, won the approval of all members of the profession.

THE death is announced of Mr. William Adams, the well-known orthopædic surgeon. Mr. Adams, who was specially noted for his interest in operation for the cure of deformities arising from ankylosis of the hip-joint, was consulting surgeon to the National Hospital for the Paralysed and Epileptic.

THE anniversary dinner of the Medical Society of London will be held in the Whitehall Rooms of the Hôtel Métropole on Thursday, March 8th, at 7 P.M. Communications should be addressed to the honorary secretaries, Dr. James Calvert and Mr. F. C. Wallis, at 11, Chandos-street, W.

THE annual oration of the Hunterian Society will be delivered by Dr. F. J. Smith in the theatre of the London Institution, Finsbury-circus, on Feb. 14th at 8 30 P.M. The subject will be the Influence of Modern Medicine on Surgery. Members of the profession are invited to attend.

THE death is announced of Francis Charlewood Turner, M.A., M.D. Cantab., F.R.C.P. Lond. Dr. Turner was physician to the London Hospital and consulting physician to the North Eastern Hospital for Children and the London Orphan Asylum.

IT is announced that the Prince of Wales has kindly consented to lay the foundation-stone of the new infirmary at Newcastle to be built in commemoration of Her Majesty's Jubilee. The ceremony will take place in June.

Dr. William Pasteur, assistant physician to the Middlesex Hospital, and dean of the Medical School has been elected physician to the hospital.

Mr. Reginald Macleod, C.P., has been appointed Registrar-General in the place of Sir Brydges Henniker, who has retired.

THE WAR IN SOUTH AFRICA.

AT the moment of writing there is little official news to indicate the movements of General Buller's force. The situation may perhaps be best described as one of hope not unmixed with anxiety on the part of the public, reticence on the part of Government, and, we fear, much futile, if not mischievous, action on the side of those who are animated by merely party spirit or are unworthily seeking an ephemeral notoriety by indulging in hostile and indiscriminate criticism. No doubt there have been miscalculations and blunders—an under-estimation of the extent of the rebellion and of the forces at its back, and an over-estimation of our own military power and prowess—some of which were avoidable, but this is not the time to go into all that. The nation has now to look to the present and the immediate future and to follow out stubbornly and with set purpose a definite line of action directed to a definite end. The country is, not for the first time in its history, face to face with a crisis of magnitude, and we feel confident that our present difficulties will be met with the same dignity and fortitude that have characterised the nation in the past. It is no new thing, after all, for forces acting on the defensive and occupying entrenched positions to offer a strong and formidable resistance. It was so in the Russo-Turkish war in the case of Plevna, in the Franco-German war, and, to cite examples nearer the present time, we may point to our own experience in the late tribal campaign on the North-Western frontier of India. If Sir Redvers Buller succeeds in the relief of Ladysmith the complexion of the war will change. A concentrated force will then be free to carry out the original strategical plan of the campaign. The news from General French on the Orange river and from General Hector Macdonald on the Kiet river is reassuring in the meantime, and reinforcements from all sides, it must be remembered, are pouring into South Africa, which reinforcements include a strong force of Royal Artillery, mounted infantry, and cavalry.

We are very glad to notice that the successful work done by the Royal Army Medical Corps during the present war was mentioned and duly recognised in the House of Commons during the late debate on the amendment to the Address. While on this subject we may say that we have only met with one discordant note in the praise accorded to the medical service by the press of this country. It had reference to Wynberg, and we have the best authority for stating that it was incorrect. Our readers have had the assurance, moreover, of Sir William Mac Cormac and subsequently of Lord Roberts that the military hospitals are in a highly satisfactory condition, and from all sides we have heard nothing but commendation of the medical arrangements. Recently we had an opportunity of seeing an extract from the letter of a staff officer at De Aar in which he alluded in terms of high commendation to a hospital train and its fittings. We are a little surprised that contradictions of the rumour to which we refer which have reached headquarters from authoritative sources have not been officially made public.

Netley Hospital is becoming full of patients from South Africa. It was visited the other day by a Royal party from Osborne and it has been intimated that Her Majesty will shortly inspect that institution and visit the wounded there. In the hospital at the present time there are about 800 patients, of whom 686 are from the front. Of these, 357 are sick and 329 wounded, whilst 279 cases have already been treated and discharged either on furlough or to go back to the front. There is still room for 300 patients. Special hospital huts are being erected at the rear of the central buildings which can accommodate 1000 extra patients. Arrangements have been made for the convalescents to leave Netley as soon as they are able, so that the hospital will be available for the wounded as they arrive.

The Royal Army Medical Corps has a grateful recollection of the service Lord Lansdowne rendered them in the past and a keen appreciation of the very liberal hospital arrangements provided for the sick and wounded in this campaign. It goes without saying that he has had an enormous

amount of responsibility and labour in connexion with this war. His department has been very generally abused. We trust that none of our readers will be found among his too previous critics.

Sir William Mac Cormac continues his interesting notes this week.

HOSPITAL ACCOMMODATION FOR THE SICK AND WOUNDED FROM SOUTH AFRICA.

We give below the names of some of the larger hospitals, the governors of which have undertaken to provide accommodation for the sick and wounded from the seat of war. We also give the number of beds which each institution is able to place at the disposal of the War Office. This does not pretend to be a complete list and we shall be glad to hear from other institutions concerning their intentions. It should be pointed out that the omission of the name of any institution does not necessarily show any want of patriotism in that institution, the pressure on many of our large hospitals being so excessive that they are unable to find room for the ordinary applicants for beds. It would be of no national service whatever for such hospitals to make any attempt to help the War Office. Mr. Sydney Holland, the chairman of the London Hospital, explains in the letter which we publish on page 423 exactly the conditions under which the possible assistance of the hospitals has been sought; and while we feel confident that every medical institution in the country would, if it were necessary, be only too willing to provide beds for those who may be wounded or who may fall sick in the cause of their country, we trust that the numbers of our wounded and sick will not be so large as to outstrip the regular accommodation at Netley and the Herbert Hospitals.

	Beds.
St. Bartholomew's Hospital	50
St. George's Hospital	20[1]
Guy's Hospital	20[2]
St. Mary's Hospital	30
Middlesex Hospital	—[3]
St. Thomas's Hospital	25
University College Hospital	20
Westminster Hospital	20
King's College Hospital	15
Woodlands Convalescent Home, Leeds	25 to 40
Royal Infirmary, Edinburgh	100
Liverpool Northern Hospital	8
Royal Infirmary, Sheffield	24
General Infirmary, Leeds	10
General Hospital, Birmingham	20
Sussex County Hospital	—[3]
Royal Infirmary, Liverpool	30[4]
Italian Hospital	2
Royal Orthopædic Hospital	10
London Temperance Hospital	10

The Central Hospital Council for London have been informed by the Director-General of the Army Medical Department that all patients arriving from South Africa will be first sent to Netley or to the Herbert Hospital, Woolwich, for assortment and for the regularisation of their papers, and they will be thence drafted as necessity arises to other hospitals. Any patients sent to the London hospitals will in all probability be drafted from Woolwich and will be, as regards quite nine-tenths of them, men who have come from the seat of war in South Africa. In no case will patients suffering from venereal or infectious diseases be sent. The patients will be under the entire charge of the hospital staff, and subject to the hospital rules, as in the case of ordinary patients, and they will be removed by the Government when required. Probably no beds in London hospitals will be needed for three months, and at least 14 days' notice of the patient's arrival will be given. The patients will embrace privates and non-commissioned and warrant officers. Ample provision has already been made for patients needing treatment in convalescent hospital and homes.

[1] This number would be increased should urgent necessity arise.
[2] 12 surgical, eight medical.
[3] As many as room can be found for when application is made.
[4] 18 of these beds are not entirely free of charge.

(NOTES FROM SIR WILLIAM MAC CORMAC.)

(Continued from p. 336.)

WE arrived at Cape Town from Natal, a journey of 1000 miles, on Jan. 8th. People at home do not realise the immense distances here which occasion the greatest difficulty in prosecuting the war. On the 9th I visited the general hospitals at Wynberg and at Rondebosch, a few miles on this side of Wynberg, and also the Portland Hospital.

No. 1 General Hospital comprises all the hospital buildings at Wynberg and has been already described by me in my first letter.[1] I was consulted concerning many wounded officers, and inspected the wards which I found in excellent working order. 120 wounded officers have passed through the wards since the battles on the Modder river and at Colenso. The wounded are all very cheerful and are doing well. Several of them are to be sent home in a few days in the *Majestic*, these being principally cases unlikely to recover before the end of the war. No. 2 General Hospital consists entirely of tents. These have been pitched in a very suitable position, on dry, sandy soil, on the gentle slope of the hill near No. 1 General Hospital. It is made up of 99 double-fly marquees, each containing six spring beds, besides operating and store tents. All the tents are floored with boards, and there is an ample supply of easy-chairs, flowers, and all the minor luxuries of a hospital. The total number of beds is 504, and there are the usual store, office, operating, and men's tents. About 350 cases are at present provided for in this hospital. The staff consists of five medical officers of the Royal Army Medical Corps, 12 civilian surgeons, and eight sisters of the Army Nursing Service. I here assisted at an operation and visited all the serious cases, giving my opinion where it was invited, as was often the case.

On leaving this hospital I proceeded by train a few miles nearer Cape Town to Rondebosch, where No. 3 General Hospital and the Portland Hospital are situated together on elevated ground, led up to by a road running through beautiful pine woods. No. 3 General Hospital is made up as follows:—There are 73 double marquees, each containing from four to seven beds, according to urgency; one marquee as an operating tent, this being preferred by the commanding officer to the ordinary small operating tent of the field hospital pattern; two tents for the use of patients before and after operation; a darkened tent for x-ray purposes; and six store tents. The process of erection of this hospital was begun on Dec. 9th, and it now presents a most neat and orderly appearance and is in full working order. The marquees are floored with wood and provided with first-class beds. Large pots of flowers have been placed between the tents and easy chairs abound in suitable situations beneath the trees for the convalescent patients. The situation is a charming one as regards natural beauty and makes a cheerful and invigorating spot for the healing of mind and body. The soil is a bright white sand and lovely pine trees and oak trees flourish amazingly. This whole hospital was, of course (as were also the other hospitals), erected by the men of the Royal Army Medical Corps. The detachment of this corps at this hospital numbers 96 non-commissioned officers and men, who are under the command of Lieutenant-Colonel Wood, R.A.M.C., and Major Keogh, R.A.M.C.

The Portland Hospital, the generous gift of the Duke of Portland, is an admirable installation. It is under the military command of Surgeon-Major Kilkelly, Grenadier Guards, but he and two non-commissioned officers of the Royal Army Medical Corps are the only military elements connected with it. The staff consists of four civil surgeons (Mr. Bowlby and Mr. Wallace being at the head), four nurses, and 33 St. John Ambulance men. Captain J. F. Bagot, M.P., acts as secretary, and Lord Henry Cavendish Bentinck as treasurer. The hospital consists of 12 tortoise tents, each of which is capable of accommodating 10 patients if necessary. Each tent contains at present only six beds. These tortoise tents are very commodious and comfortable, but are not considered by some of the military medical authorities to be so suitable as marquees, on account of their lightness and the fact that they are not double. The

[1] THE LANCET, Dec. 23rd, 1899, p. 1755.

beds are comfortable spring beds of a convenient size and with good mattresses. The instruments and equipment were all bought privately from the best London firms, and there has been erected a special x-ray tent containing all the necessary equipment, including a dynamo. This hospital had only arrived three days before my visit, but, having the assistance of a detachment of the Royal Army Medical Corps from No. 3 General Hospital to erect the tents, the hospital was perfectly ready for the receipt of patients, and in fact a few wounded officers arrived almost at once.

On the 12th, by request of Lord Roberts, I accompanied that general and his staff during an official inspection of the Wynberg hospitals and the convalescent sanatorium situated at Claremont—a suburb about three miles from Wynberg. This sanatorium is built like a large hotel and has been employed for some time as a hydropathic establishment under a civilian medical practitioner. It is beautifully situated among pine trees. Half of the establishment has been hired by Government for the purpose of accommodating convalescent officers. This has been greatly appreciated by these sufferers, as it takes them away from the surroundings of the hospital proper where they have been treated, and from scenes of sickness and suffering, and enables them to enjoy more freedom and to associate with cheerful convalescents. At present there are 30 officers in this establishment for whom the Government is paying 10*s.* per diem per head. Each officer has a separate bedroom and there is a very spacious dining-room, a gymnasium, and, in fact, all the luxuries of a first-class establishment.

I also visited the hospital ship *Princess of Wales* which arrived a few days before from England. A description of this vessel would be superfluous, as that has already appeared before the ship left England. She has not yet received patients on board. Probably she will be sent on to Durban and embark sick and wounded at that port for home. Two German military attachés—Stabsarzt Dr. Schmidt and Stabsarzt Dr. Krumacher—have just returned to Cape Town from Modder river, where they have been working in the field under the medical officers of the brigade of Guards. They were present at the battle of Magersfontein and expressed great satisfaction and admiration of the medical work they witnessed there. It is worthy of note that these attachés from the German army are the only foreign military medical officers who have as yet made their appearance. Foreign Governments have all sent military attachés for tactical purposes, a fact which brings more prominently to notice the absence of the medical element. I do not remember that accredited medical attachés have been sent in any previous campaigns and it would appear to me an excellent example to follow in any subsequent one. A military medical attaché would probably see everything medical, which would not be the case were he attached to a foreign ambulance.

I add some brief notes of a few of the more remarkable cases at present in the base hospitals.

HEAD INJURIES.

CASE 1.—The patient was wounded on Dec. 15th by a Mauser bullet at a range of 600 yards or 700 yards. The entrance wound was immediately below the inner canthus of the left eye. The bullet passed through the spinal column in the upper dorsal region, emerging at the right post-superior iliac spine. The symptoms were a complete paralysis from the umbilicus downwards and a large patch of sloughing over the sacrum, and there was also cystitis. The patient has not improved since the injury although the wounds are healed, and he will die, as in any similar spine-fracture with lesion of the cord.

CASE 2.—The bullet in this case entered one and a half inches vertically above the external angular process of the frontal bone on the left side, emerging at the angle of the lower jaw on the right side. The same bullet then entered about the middle of the right clavicle, turned completely over, and lodged in the tissues above the clavicle. The bullet was removed after being skiagraphed. The bullet did not touch any bone. Loss of smell followed the wound, with œdema of the left lid and partial paralysis of the third nerve. At present the sense of smell has not returned and a central blackness in the field of vision has made its appearance. There is possibly a partial detachment of the retina.

CASE 3.—This patient had received a wound on Dec. 15th at a probable range of 300 yards. The entrance wound was at the junction of the malar bone and the zygoma on the right side. The bullet passed along the floor of the orbit and divided the right rectus muscle. The exit was through the lower lid of the left eye. The wounds at present have perfectly healed and there are no symptoms beyond upward strabismus which is very marked.

CASE 4.—The wound was received on Dec. 15th at a probable range of 500 yards. The entrance wound was through the left malar bone, and the exit wound was about one inch above, and slightly anterior to, the inferior angle of the scapula on the left side. The symptoms were complete paralysis of the left side of the body and the right arm (the right leg was not affected), pain on pressing over the seventh cervical vertebra, and difficulty in swallowing. There was no hæmoptysis. The paralysis is improving and there is no pain. Sensation first appeared, and then power of motion, in the right arm and then in the left arm and left leg. The other symptoms have also disappeared.

CASE 5.—The patient was wounded by a Mauser bullet which entered the left mastoid process near its apex. It passed across the hard palate, which it deeply grooved, and emerged through the right side of the upper lip, knocking away the incisor and premolar teeth on that side. The symptoms were deafness and facial paralysis, which set in at once on the receipt of the injury, but these have almost completely disappeared. There are no other symptoms and the wounds are healing.

In No. 1 General Hospital at Wynberg there have been up to the present time 24 cases of gunshot injury to the skull and three of the sufferers have died. No. 2 General Hospital shows a record of 16 cases, with two deaths.

WOUNDS OF THE THORAX.

CASE 1.—This was the case of a man wounded by a Mauser bullet on Jan. 1st at a range of 600 yards. The entrance wound was immediately below the acromial end of the left clavicle. The bullet passed on the inner side of the coracoid process, and the exit wound was an inch below the right acromion through the posterior fold of the axilla. The wound was received at 5.30 P.M., and after receiving it the man rode 200 yards and was then put into an ambulance. There had been slight hæmoptysis. He did not swallow any solid food until noon the next day, when the action of swallowing produced great pain over the manubrium sterni. This pain on swallowing persisted until the 8th. The pain on swallowing has now disappeared. There have been two severe attacks of dyspnœa with cyanosis since the 8th. The patient has severe pain in the cardiac region on coughing or on deep inspiration. The pulmonary physical signs were at first very obscure, but at present there are well-marked bubbling râles over both pulmonary bases with the addition on the left side of dulness on percussion, diminished respiratory murmur, and absence of vocal fremitus. The temperature is normal. In the supra-clavicular fossa on the left side there is a distinct swelling and a high-pitched systolic bruit can be heard immediately below the left clavicle. This bruit is also discoverable in a diminished degree on the right side. It is not conducted up the left carotid but down the left axillary artery. It is probable that injury has been done to the œsophagus, but probably not a penetrating wound, and there is possibly a traumatic aneurysm of the subclavian artery, but the evidence of this is by no means sufficient. The case is obscure.

CASE 2.—The patient was wounded by a shrapnel bullet on Dec. 12th. The bullet entered about the middle of the sulcus of the biceps muscle on the outer side of the left arm, and emerged at a corresponding point on the inside. It then entered the thorax in the fourth interspace at the posterior axillary border. The bullet was extracted from beneath the eleventh rib in the anterior axillary line and about one inch of the rib was resected. There was hæmothorax on admission. A pint of fluid blood was let out during the operation. There was no wound of the actual lung tissue. At present there is a slight cough, but otherwise no symptoms. The wound of operation is healing, and the other wounds have already healed.

CASE 3.—The patient received a wound from a Lee-Metford bullet at a close range of ten yards. The bullet entered the right sterno-clavicular joint, making its exit about the middle of the spine of the left scapula. No symptoms occurred. The wounds healed by first intention, and the patient is now convalescent.

CASE 4.—The patient received a wound from a Mauser bullet on Dec. 15th at a range of 700 yards. The entrance wound was immediately to the right of the spine of the eleventh dorsal vertebra, and the exit wound was in

the eighth intercostal space on the right side in the mid-axillary line. There was very severe hæmorrhage from the exit wound on receipt of the injury, and at present the physical signs indicate an effusion into the base of the right lung. Otherwise the patient is none the worse and the wounds have healed. The nature of the pulmonary effusion is unknown.

CASE 5.—This patient received a gunshot wound on Dec. 15th at a probable range of 700 yards. The entrance wound was an inch from the sternum over the second rib on the right side and the exit wound was an inch above the anterior superior iliac spine on the right side. Hæmoptysis, which has now ceased, was present for four days. There are no other symptoms except dyspnœa. The wounds have healed by first intention.

CASE 6.—The patient was wounded at Colenso on Dec. 15th at a range of about 600 yards. The entrance wound was at the posterior border of the sterno-mastoid muscle about its centre. The bullet has been located by the skiagram in the left claviculo-scapular region, the exact spot being as yet undeterminable. On entry there was marked numbness of the left hand, but this has now disappeared. There was also paralysis of the left deltoid muscle which still persists, so that he cannot elevate his arm at the shoulder-joint. There were no other symptoms, and the entrance wound healed at once.

CASE 7.—The patient received a wound from a Mauser bullet at a range of uncertain distance. The entrance wound was about the middle of the infra-spinous fossa of the right scapula, and the exit wound was at the outer edge of the right sterno-mastoid muscle about two inches above the clavicle. There was a certain amount of hæmoptysis at the time of the injury, but this has now disappeared. Swallowing was also difficult, but is now all right again. There is a very loud purring bruit over the right carotid artery, which is probably the seat of an arterio-venous aneurysm.

MISCELLANEOUS WOUNDS.

CASE 1.—A wound from a Mauser bullet was received on Jan. 2nd at an unknown range. The entrance wound was three inches directly below the inferior angle of the right scapula in the ninth intercostal space. The exit wound was about three-quarters of an inch to the right of the xiphoid cartilage just below the seventh costal cartilage. The receipt of the wound was followed by a great deal of tympanites, vomiting, tenderness, and pain, but the patient is now doing well and the wounds have healed.

CASE 2.—In this case the entrance wound was half way between the left trochanter major and the posterior superior iliac spine on the left side, and the exit wound was in the outer part of the fold of the right buttock. There were no symptoms and the wounds have healed.

CASE 3.—This was a case of a bullet wound received on Jan. 4th at a range of about 600 yards. The entrance wound was two inches above the centre of Poupart's ligament and in a line from that ligament to the umbilicus. The exit wound was in the centre of the right buttock. There were no symptoms and the wounds have healed.

CASE 4.—In this case a Mauser bullet perforated the right tibia a little above its centre without causing complete fracture. The fibula was not broken. This case has progressed without interruption and the external wounds have healed.

CASE 5.—In this case a Mauser bullet traversed the right knee-joint beneath the patella, across the centre of that bone. The wounds have healed and the internal damage to the joint is apparently undergoing an uninterrupted recovery.

CASE 6.—The patient received a wound from a Mauser bullet at an unknown range, probably of the subscapular artery, the history being that a diffuse aneurysm was found in this region. Three weeks after the receipt of the injury the sac was laid open. The artery could not be located as it entered or left the cavity, so the axillary artery was tied in its first part. The patient is doing well.

CASE 7.—In this case the entrance wound was two and a half inches to the right of the second lumbar vertebra and the exit wound was below the ninth central cartilage on the right side. At first there were no symptoms, but the patient soon after the receipt of the injury became unconscious and hæmatemesis set in. There was also absence of abdominal breathing and tenderness over the hypochrondriac region. An iliac abscess is reported as having burst into the bowel and later pus passed for two days in large quantities. The patient is now doing well and no symptoms remain.

CASE 8.—The patient had received a bullet wound about a fortnight before at an unknown range. The entrance wound was one inch above the umbilicus in the median line. The exit wound was at the tip of the twelfth rib on the right side. The wounds have practically healed and there are no symptoms, although it was reported by Major Harris, R.A.M.C., of the field hospital at the front, that the omentum protruded after the injury was received, and that after replacing it he (Major Harris) had put his finger into the abdominal cavity.

CASE 9.—Field-Cornet Pretorius (a Boer prisoner) is lying in No. 1 General Hospital with an amputated thigh. I have previously mentioned this case. He received a bullet through his left knee on Oct. 21st. The bullet entered at the external side of the knee-joint and made its exit through the patella which was badly fractured. He made a remarkably good recovery from the injury, and was getting about on crutches, when, on Nov. 20th, he slipped and fell, refracturing the patella and bursting the cicatrix and skin open and causing a severe wound which suppurated. It then became necessary to amputate the thigh. The operation was successfully performed on Dec. 26th at the junction of the upper and middle thirds. The patient is now doing well.

It is very difficult to understand how some of these traversing wounds of the thorax have been so promptly and so easily recovered from. In the case of the abdominal injuries in some the visceral contents may have escaped perforation, but this can only be true of a few. In the others probably an empty alimentary tract and the rapid closing of the small perforations the bullet causes may account for the absence of any severe symptoms, but in some instances the nature and position of the wounds and the direction which the bullet has in every probability followed render recovery, practically either without symptoms or without any symptoms of importance, inexplicable.

WILLIAM MAC CORMAC.

(FROM OUR SPECIAL CORRESPONDENT AT THE BASE.)

Up to Jan. 17th the following operations have been performed in No. 1 General Hospital:—Amputations: of the arm, three; of the arm at the shoulder, two; of the forearm, one; of the thumb and fingers, four; of the thigh, six; and of the leg, six—total, 22. Excisions: of the elbow, one; of the ankle, two; and of part of the ulna, one. There have been 27 extractions of bullets, two cases of laparotomy, three sutures of nerves, and six cases of ligature of arteries. The patients in two cases of thigh amputation and in one case of laparotomy died.

We have had two or three trains down since I last wrote, but the cases were mostly medical and at the time of writing there are not many in hospital and we are sending a large number home in the *Majestic* to-morrow. Lord Roberts and Lord Kitchener visited the hospitals last week and were full of praise as respects the arrangements made for the wounded. I had not seen Lord Roberts for several years—the last time I met him being in India in 1892—but he is still the same courteous, kindly man that everyone knew him to be out in the East and he possesses a marvellous memory for faces. Lord Kitchener looked as fit as ever and seemed struck by the difference between the climate of Wynberg and that of Omdurman.

I hope that in the next great war we have in a decent climate so much money will not be spent on providing costly hospital ships, for although they are undoubtedly good in theory I cannot myself see where they come in in a war like the present when we have large and fast transports to convey sick and wounded to Netley. For this reason: the majority of patients who are sent home from this country are convalescent and do not require the elaborate arrangements which exist on board the hospital ships. The climate here is so good that there is absolutely no reason to send anyone to England till his wounds have practically healed. It must be understood that I am referring to hospital ships to convey wounded home and not of those engaged in bringing wounded from Natal. The latter ships, of course, should be as completely fitted as possible as the cases have to be treated on board. It is not as if we were fighting in a malarious or tropical country. From such a country it is absolutely necessary to clear patients out as quickly as possible, but here, where we have one of the finest climates in the world, I cannot myself see the necessity of equipping ships with exceedingly expensive fittings, operating rooms, and x-ray chambers, when the chances are that all the patients which they are likely to take

home will have been convalescent some weeks before they embark. This, of course, is only my opinion, and I am quite open to correction on the matter. Given large, roomy, and fast transports, with no overcrowding, I am sure they would be found to answer better and would not be so expensive. Ask the authorities at Netley how many cases have arrived there which actually required hospital accommodation on board ship, excepting medical cases, and I think you will be surprised at the number. Far be it from me to cavil at the kindly thought and generous expenditure which have been shown in fitting out these floating hospitals, but still the fact remains that, given a good climate like that of South Africa at this time of year, their sphere of usefulness must be restricted to the conveyance of cases from coast ports to Cape Town for treatment at the base hospital, and not for the voyage to England.

The sanatorium at Claremont is proving a very useful adjunct to the various hospitals where officers are treated. Directly the patients are able to move about and do not require any elaborate dressings they are drafted to this charming place, where, surrounded by beautiful scenery and lovely gardens and looked after by a staff of nurses and medical attendants, they are soon fitted for duty again.

Wynberg, Jan. 17th.

THE HOSPITAL SHIP "NUBIA."

(FROM A DURBAN CORRESPONDENT.)

The conversion in Southampton of the steamship *Spartan* from an ordinary passenger-ship into a hospital ship, with accommodation for 130 patients, last October, elicited favourable comments from the home papers. However, in the fitting up in Durban of the transport *Nubia* for hospital purposes, with accommodation for nearly 500 patients, it may be fairly claimed that the young colony of Natal has shown its aged parent "how the thing ought to be done." This will not be doubted when it is stated that the entire transformation was effected in eight days. The *Nubia* belongs to the Peninsular and Oriental Steam Navigation Company and was employed last summer in their China mail service. She is 430 feet long, 49 feet broad, of 5914 tons register, and she has a sea speed of 14 knots. Last October she was chartered as a transport and brought the 1st Battalion Scots Guards to the Cape. She then proceeded to Durban, where she will remain until the present campaign is over. On Dec. 25th a telegram was received by the naval authorities at Durban from the General Officer Commanding the Forces in Natal requesting them to select and fit up a large steamer as a hospital ship with all possible speed. The *Nubia* was inspected, and, being deemed suitable, 130 plumbers, carpenters, and painters were placed on board of her the following day. Most of these workmen were refugees from the Transvaal. By working day and night the ship's whole aspect was changed and her interior completely rearranged, and on Jan. 4th, 1900, she was converted into a floating hospital replete in every detail and ready for the reception of the sick. The *Nubia* had been fitted up for the carrying of 2000 troops, and this entailed an additional amount of labour as all the extensive troop-fittings had to be removed ere the work could be begun. It speaks well for the resources of Durban and for the energy of those to whom the work was entrusted that every cot and every fitting had either to be supplied or constructed locally.

Altogether the *Nubia* has accommodation for 474 sick, wounded, or convalescent patients. These are distributed into seven wards named from A to G, beginning in the fore part of the ship with Ward A and finishing in the stern with Ward G. Ward A can accommodate 100 convalescents, B Ward 26 cot cases, C Ward 32 cot cases, D Ward 200 convalescents, E Ward 28 cot cases, F Ward 30 cot cases, and G Ward 30 cot cases, whilst 28 convalescent officers will have the use of the passengers' cabins, in which only the lower berths will be used, the upper ones having been removed to make more room. The convalescent men will sleep in hammocks. The wards are all between decks and can be completely separated from one another by closing the water-tight doors. In Ward F and Ward G, which will be used for the most serious cases, swinging cots are provided, so that when the ship proceeds the motion will be reduced to a minimum, thereby conducing to the comfort of these patients. The floors of the wards have all been varnished and the sides match-boarded and painted white, which adds an air of brightness and cleanliness to their appearance. The vessel is ventilated throughout by means of steam ventilators and electric fans; as a result the wards are always delightfully fresh and cool, even in the middle of the day, when the heat is sometimes oppressive. The operating theatre is situated on the main deck aft, and is provided with all the latest appliances for the pursuit of antiseptic surgery; further aft still is a mortuary, where post-mortem examinations will be conducted. The plentiful supply of fresh water, so necessary at post-mortem examinations, has received due attention. The dispensary opens out of Ward E and a washhouse and laundry are situated on the main deck amidships. The approaches to the wards from the upper decks have been made easier and more adapted to the needs of invalids by having the steps broader and less perpendicular than is usual on board a ship. Two lifts for the use of helpless patients have been fitted. They work by hand and are so contrived as to be free from jerking. The electric light installation has been rearranged and the bright glare subdued by the use of coloured glass shades.

The medical staff consists of six medical men, seven nursing sisters, and 35 attendants. A guard of 10 marines from H.M.S. *Terrible*, which is stationed here, are attached. Their duties consist in keeping sentry at the gangway, seeing that due order and discipline are maintained, and that no convalescents leave the ship without permission. During the conversion of the ship Sir William Mac Cormac paid a visit to it and expressed his satisfaction with the excellence of the work. Whilst inspecting the wards he gave several valuable hints and suggestions. The ladies of Durban came forward with their usual munificence and supplied numbers of deck chairs, small tables, and screens, together with many hanging ferns and palms. These enormously enhance the general comfortable and cheerful appearance of the wards. Every day bundles of newspapers and illustrated periodicals arrive from sympathetic friends and well-wishers.

The patients will be brought down from the base hospitals at Pietermaritzburg and Frere, and will travel in special hospital trains, which are rendered conspicuous by having the Red Cross painted on the carriages. These trains generally consist of seven coaches, of which five are saloons, one a kitchen car, and one a store car. The saloons for the wounded contain 25 berths, which are arranged lengthways with the train. The berths are arranged in two tiers. In the middle of each saloon on either side are a pair of doors similar to those of the luggage compartment of an ordinary train, and the ends of the berths adjoining these doors are so arranged as to facilitate the passage of the patients to the narrow centre passage which runs the entire length of the train. At one end of the train is a store room, fitted with racks and shelves for the rifles and kits of the unfortunate men who are brought on board. At the other end of the train is a kitchen car, provided with a large store, an ice-chest, and every convenience for furnishing the wounded with nourishment, such as beef-tea and jellies, during the railway journey.

The patients will be kept aboard ship until they are able to resume their duties at the front, or if incapacitated from further service they will be sent home as soon as possible. Cloudless blue skies from week's end to week's end, with an occasional shower of rain to vary any possible monotony, the fresh salt smell of the sea, cool breezes from the south-west, and an equable temperature day and night,—these are the climatic conditions of Durban, and it is trusted that they will soon bring back health and strength to these invalids who, having shed their blood in fighting their country's battles, are now justly entitled to every care and comfort that a grateful country can provide.

Durban, Jan. 13th.

THE ANNUAL REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS (PART II.).

THE work of this important department of State has increased enormously of late. The present report by Dr. Whitelegge, which was published last week and which is the second and concluding part of the report, Part I. of which was issued in April, affords evidence of this fact. The duties of this department have increased owing largely to considerable fresh legislation having been applied to the

control of factories and workshops, and it is no exaggeration to say that the subject of the health conditions of operatives has received more attention during the past few years than any other coming under the head of domestic legislation. Generally speaking the report will be found to contain satisfactory evidence of the care which our laws take to secure as far as possible the best hygienic conditions for the circumstances under which a great number of our workmen and workwomen pursue their toil.

DANGEROUS MACHINERY.

Under this heading may be included accidents which arise in all industries. Substantial progress has been made with the fencing of dangerous machinery, but there is an increase in the record of accidents from certain causes, which Dr. Whitelegge attributes mainly to the following causes. 1. Fuller appreciation and observance of the requirements of the 1895 Act which not only extended the scope of the Act to additional important industries but called for the notification of minor accidents formerly not reportable. 2. Increased activity of trade, especially in the branches which are attended with risk to life and limb. 3. Increased use of machinery and speeding of machinery. Again, the closer attention which has been given in the department in the last few years to the recording of accidents is doubtless responsible for some part of the increase even among those reportable to the surgeon. The increased number of reports of accidents adds naturally to the work of the department.

DANGEROUS TRADES.

These include the industries of pottery, lucifer match-making, and white lead manufacture. There has been an increase during the year of the number of processes which have come to be regarded as dangerous and accordingly fresh demands have been made upon the time of the inspectors. Several inquiries connected in particular with the pottery and lucifer match manufactories were undertaken during the year by Dr. Thorpe and Dr. T. Oliver who were engaged together on the pottery inquiry, while Mr. G. Cunningham joined these gentlemen in the inquiry relating to poisoning by phosphorus fumes in match factories. Both reports were dealt with at length in our columns. Some changes have been made in regard to the special rules applied by the Home Department to factories and workshops. The principal event of the year in connexion with these special rules was the arbitration at Stoke-upon-Trent, which arose out of the amended code for the manufacture and decoration of earthenware and china. The report of the medical officer, Dr. T. M. Legge, gives an account of this and the text of the rules.

LEAD, PHOSPHORUS, AND ARSENIC POISONING.

The report of the medical inspector of factories comprising the industries which are placed under special rules as affecting the health of the operatives is very interesting. He states that the requirements of Section 29 of the 1895 Act are producing very important results and bringing to light illness often contracted from hitherto unsuspected sources. The following up of a notification by a report from the certifying surgeon who sees the patient and visits the works where the illness was contracted has evidently placed a mass of valuable material at the disposal of the Home Office. Thus there is an increase in the total number of reported cases of lead-poisoning, which is due rather to the greater attention on the part of medical practitioners throughout the country to the duty of notification than to increase of plumbism generally. The number of reported cases of lead poisoning in 1897 and 1898 correspond closely. Of the total 457 cases of lead poisoning notified in 1898 as having occurred in china earthernware works 429 were reported in the Midland division which comprises the Potteries district. Dr. Legge makes some interesting observations in regard to the various symptoms referable to lead, to the number of attacks, to the duration of employment of those attacked, and to the degree of severity of the cases. Similar observations are made in reference to the white-lead industry. The report of Dr. Thorpe and Dr. Oliver dealing with the question as to how far leadless glazes or fritted glazes are practicable is, of course, here referred to, but the important practical issues which it raises will form the subject of comment in the next annual report. The report also of these gentlemen, in collaboration with Mr. George Cunningham, on phosphorus manufacture and necrosis in match factories is also to be discussed in the next annual report. In view of the announcement by a very large firm of match manufacturers that they have recently succeeded in doing away with yellow phosphorus in the production of a "strike anywhere" match it is probable that further action may be taken in advance of that suggested by the report. Cases of mercurial poisoning are recorded in connexion with the manufacture of electric filament lamps. The great source of industrial mercurial poisoning, the silvering of mirrors, has, however, ceased with this process becoming obsolete. The relation of pulmonary diseases to life in a dust-laden atmosphere affords an interesting section, and micro-photographs showing the nature and character of the dust taken from the air of a large silk factory are reproduced in the report. Dust arising also from china scouring and from flax scutching is illustrated in the same way.

COTTON CLOTH FACTORIES.

Certain important regulations came into force in regard to this large industry in 1898. Perhaps the most interesting was that in which a standard of purity for the air was required. This was fixed at a maximum limit of nine volumes of carbonic acid to every 10,000 volumes of air. Mr. W. Williams, the inspector under the Cotton Cloth Factories Acts, was able to obtain evidence of enormous improvement made in the health conditions of weaving sheds in one or two of the factories in which the new requirement had been carried out. Another regulation refers to maintaining an artificial humidity of the air by means of steam. Hitherto it appears that often the steam for this purpose was raised from offensive water. Thus Mr. Williams says that in some of the sources of water used for this purpose it is not uncommon to see the putrefying carcasses of dogs floating and, as he remarks, "operatives can hardly be charged with over-fastidiousness when they object to inhale air impregnated with steam raised from such sources." We notice that a case was reported last week in which certain cotton manufacturers were summoned for using impure water in this way. Mr. Williams trusts that reform will soon be gained in this direction.

WOMEN INSPECTORS.

Not the least interesting feature of this report is the work conducted by Her Majesty's women inspectors. Unhealthy and dangerous occupations occupy the premier consideration, but it may be remarked that this comparatively new organisation is fulfilling its duties admirably.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

(Continued from p. 331.)

IN the second notice of the final report of Lord Llandaff's Commission which appeared in THE LANCET of Feb. 3rd we gave the result of the deliberations of the Commissioners on the question of the proposed purchase of the undertakings of the metropolitan water companies by the London County Council. It may be remembered that the Commissioners advised that the London County Council should not be allowed to purchase the undertakings, and that they gave the reasons which had led them to come to that decision.

Another very important inquiry which the Commissioners were directed by their terms of reference to undertake was whether, in the event of the water companies' businesses not being acquired, additional powers of control should be exercised by local or other authorities, and if so what those powers should be. At the outset of this inquiry the Commissioners had to consider the meaning which they should attach to the word "control." They define control as "measures by which the due performance of the existing statutory obligations of the companies can be efficiently and conveniently secured and enforced." The Commissioners point out that the main obligations of the water companies are contained in the Waterworks Clauses Act (10 Vict., c. 17; 26 and 27 Vict., c. 93). Under the provision of the Metropolis Water Act of 1871 (34

and 35 Vict., c. 113, s. 7) the companies are bound when required by the metropolitan authority to provide and keep a constant supply of pure and wholesome water sufficient for the domestic purposes of the inhabitants who live within their limits of supply. The water must be constantly laid on at a pressure sufficient to make it reach the top storey of the highest houses, but not exceeding certain levels prescribed in the special (private) Acts of the companies. Should the metropolitan authority not insist on a constant supply being given the Local Government Board has the power to do so, but the companies are not required to give a constant supply unless regulations made by themselves and approved by the Local Government Board (to prevent waste, misuse, and contamination of the water, and prescribing also the nature and size of the water appliances inside the dwelling-houses) have been efficiently carried out in at least four-fifths of the premises for which a constant supply is required. The water companies also are free from liability in the case of frost, unusual drought, or other unavoidable cause preventing the supply. Should the cause not be unavoidable the company which fails to give a constant supply is liable to a penalty of £200 and a further penalty of £100 for every month during which the non-supply continues after notice from the Local Government Board has been given to the company, and this penalty may also be recovered by the metropolitan authority in any court having jurisdiction for the recovery of a debt for a like amount. There are also penalties for a failure to give a constant supply under the Water Clauses Act of 1847 to any person who has paid or tendered the water rate. In this case the fine is £10 and £2 for each day of default Under the Act of 1871 provision was made for the appointment of a water examiner who, nominated by the Local Government Board and paid by the companies, was to ascertain whether the water which was taken from the rivers was effectually filtered before delivery to the consumers. The Local Government Board, on the complaint of 20 householders as to the quantity or quality of water supplied, and at their own discretion with regard to the quality of water supplied, have power to appoint a person to inquire and report, and as the result of that report the Board may require a company to remove any ground of complaint. The Act of 1871 contained also certain other provisions to secure the purity of the water supplied by the companies. For example, filtered water reservoirs within five miles of St. Paul's must be covered, and water for domestic use may not be brought into the metropolis in open aqueducts unless it is filtered before distribution.

Another important provision of the Act forbids the companies to resort to any new sources of supply without giving previous notice to the Local Government Board who may prohibit the use of the proposed source. For the public services the companies were obliged to keep a sufficient supply of water for cleansing sewers and for municipal purposes generally, and for this supply the amount of payment must be settled either by agreement or, in case of difference between the company and the local authorities, by two justices. For the water used in extinguishing fires no charge is to be made.[1] Under the Metropolitan Water Act of 1897 (60 and 61 Vict., c. 56, ss. 1 and 2) any water consumer or any local authority (that is to say, the council of any county, borough, or district, the corporation of the city of London, or any vestry, district board, or local board of health in the county of London) has power to bring before the Railway and Canal Commissioners any complaint with regard to the quantity or quality of the water supplied by any metropolitan company or failure to perform any statutory duty. The Railway and Canal Commissioners may impose penalties and direct the removal of the cause of complaint. The local authorities are empowered also to assist the consumers in obtaining the determination of any question of general interest in reference to the quantity or quality of water supplied or with respect to charges made by the companies, and the local authority has power to be made a party to such proceedings and to become liable for the costs.

These enactments, the Royal Commissioners report, cover the whole ground of control as they understand it and provide some remedy for every breach, but criticism may be made of the tribunals and of the principle which runs through all these statutes for postponing action until a breach of some statutory duty has been committed. The Commissioners have been much struck with the ignorance and neglect on the part of local authorities and water consumers of the enactments which were made for their benefit. They quote the example of the Board of Works for Wandsworth which complained of defective supply for road watering, a neglect for which a summary remedy was provided and of which they did not avail themselves. Instead of doing so they contented themselves with writing to the Local Government Board. The Commissioners are of opinion that the apathy of some of the local authorities apparently depends on the complexity of the Waterworks Acts, which, they report, are very much in need of consolidation. The Commissioners considered in some detail the suggestions which were made to them for improving the machinery of control and making it more effective. Mr. Dickinson, a representative of the London County Council, suggested that representatives of that body should be placed on the boards of the companies in a majority. The control thus created would be administrative and would, Mr. Dickinson opined, be more effective than the present system. The suggestion amounted to conferring the whole direction and management of the water businesses upon representatives of the consumers and giving them nearly all the advantages of purchase without any payment of compensation. The representative directors might reduce water charges and thereby reduce dividends to a vanishing point. The proposal was apparently seriously made, but the Commissioners say that it can hardly be regarded as a practical suggestion. Sir John Lubbock suggested that water consumers had a direct interest in the economical management of the profits of those companies which had reached their maximum dividend and he thought it reasonable that one or two representative members might justly be nominated to the boards of the companies to look after the interests of the consumers. The Commissioners report that this proposal exceeds what they believe is meant by control. They consider that things which come more properly under the head of control have reference to the control of the water from the wells and from the Thames and Lee with respect to filtration and to the distribution of the water and its delivery to consumers. The Thames Conservancy Act of 1894 provides that effectual means shall be taken to ascertain from day to day the quantities of water pumped by the companies from the Thames. The engineer of the Thames Conservators has power to enter the premises of the companies and to inspect their appliances. The Conservators have acted with independence and discretion; they are a proper body to control and superintend the quantity of water taken from the Thames, and the only suggestion which the Commissioners make is that provision should be made in case of difference of opinion between the companies and the Thames Conservators as to the payment of any legal costs which may be incurred in an arbitration. In the case of the Lee the statutory provisions are less effective. The Lee Conservators have no control over the gauges which are provided by the New River and the East London Companies. Legislation requires amendment so that the Lee Conservancy Board should have power to inspect all gauges and have the same powers as those possessed at present by the Thames Conservancy.

With regard to the filtration of water the Commissioners point out that although Lord Balfour's Commission recommended that after due inquiry regulations should be drawn up with respect to filter beds no such inquiry has been made, and the Commissioners themselves think that the question is not yet ripe for settlement.

The Commissioners also considered the question as to whether it was advisable to place any restriction upon taking water from the rivers during periods of flood, and they give it as their opinion that the engineers of the water companies are even more disposed to avoid taking flood water than "theory" requires, because when flood water is taken it necessitates more frequent cleansing of the filter-beds and is apt to show "slight traces of colour in the filtered water." Several recommendations are made with regard to the efficient control of filtration, and the Commissioners report that it is more useful to test the results of filtration than to impose restrictions on the quality of the water taken. The Commissioners report that regulations are advisable: 1. To ensure that every filter-bed shall have a separate well, so that if a sample taken should prove unsatisfactory it would be possible to immediately see which filter is at fault. 2.

[1] In the case of water which has been used for putting out fires no money has ever been paid to water companies. There is a tradition, not, however, very satisfactorily authenticated, that at the time of the great fire of London the flow of water in the New River was interfered with by the incendiaries so that there should be as little chance as possible for the fire to be got under control.

That the rate of filtration in each filter should be automatically recorded and that the apparatus used should indicate the rate of filtration and at the same time record the result as a diagram. 3. That the Water Examiner should have the right of entry to the works of the companies and a right to inspect every part of the works. 4. That the Water Examiner should possess the power of prohibiting the distribution of water to consumers should he find that any particular filter-bed is defective in operation; he would thus be able to compel the company either to cleanse or improve the filter bed before it was again used. The Commissioners suggest that possibly some power of appeal against the decision of the water examiner ought to be allowed and they see no objection to allow an appeal to an arbitrator under provisions similar to those provided in the Staines Reservoir Act, 1896, ss. 20, 23, but penalties should be imposed on a company which disobeys any order of the water examiner. 5. The Commissioners acting on a suggestion made by Sir Edward Frankland suggest that bacteriological laboratories should be built close to the spot from which samples of water are taken in order that the cultivation should take place at once. At these stations experiments should be conducted on the different modes of constructing and of working filters. The Commissioners suggest that the water companies should be required to provide structural and other facilities necessary for testing the samples of water at some place near the works. Sir Edward Frankland suggested three stations, one at Hampton to examine the filtered Thames water, one at Green Lanes at the New River Company's station, one at Lee Bridge at the premises of the East London Company. The Commissioners recommend that examinations of the water which are carried out under the authority of the Local Government Board should in future be more extensive than they have been in the past, and that frequent "bacterioscopic" as well as chemical examinations should be made of the unfiltered river water, of water as it issues from the filter beds, and of the water in the wells and in the mains of the companies, and that the cost of these examinations should be paid by the Local Government Board who should be empowered to recover the expense from the water companies in such proportions as may be arranged. The Water Examiner should have the general control of the examinations and the reports should be sent to him and submitted by him to the Board with his own report. These reports should have the effect of reports under Section 35 of the Metropolis Water Act 1871 and Section 9 of the Metropolis Water Act of 1852. The Commissioners think that the application of the last section should be extended and that the Local Government Board should have power on receiving complaint from any local authority to order an inquiry as to the quality of any water supplied by any company or as to the pressure maintained in the mains. It ought also to be made clear that "frost unusual drought, or unavoidable accident," will not excuse a failure of supply should it be shown that the failure was caused because the works of the company were not in an efficient condition or had not a sufficient capacity for the storage of water.

With regard to the suggestions which had been made by some of the witnesses examined that local authorities should have power of entry to the companies' works the Commissioners report that it would be undesirable to have a dual inspection and that the system would work more smoothly if the control were vested in a Government officer whose reports would be published from time to time so that local authorities would be able to obtain full information. Such authorities might make representations to the officer if they thought his action dilatory. The Commissioners, however, point out that the local authorities have used their existing powers of control with very little zeal and efficiency, and they are on that account less disposed to recommend that any additional powers should be given to them.

With regard to the pressure of water in the mains of the companies the Commissioners report that it is reasonable to require that the companies shall record and return to the Water Examiner the pressure which is maintained in the mains at certain specified hours and also shall make a daily return giving the minimum depth of water in the reservoirs. The Commissioners do not advise that any proscription for penalties should be vested in the Water Examiner should the returns show that the companies were not acting up to their statutory duties, but they think that it would be better for him to communicate the returns to any local authority in which such power is already vested to take such action as that authority shall think best.

On the question as to whether an excessive amount of water is pumped from the wells in Hertfordshire the Commissioners decided at an early sitting that they would not reopen the investigation as it had been so recently reported on by Lord Balfour's Commission. They report, however, that the companies were not doing more than the law entitles them to, and that if there is a grievance with regard to the abstraction of water it can be only obviated by an alteration in the English law as to underground water. At the same time they quote the recommendation given by the Balfour Commissioners that "distinct obligations should be laid upon any company or local authority which is allowed to pump water from the chalk for the purposes of public supply, to keep accurate observations of the effect of their operations on the level of the water in the wells from which they pump, and return the results to the Water Examiner under such regulations as may be framed. The great difficulty which we have had to encounter has been in getting accurate and reliable information as to the actual effect of the operations now carried on. The importance of procuring this will increase each year as the limit of what can be taken from any district with safety is gradually being reached." The Commissioners concur in this recommendation, which was made in the year 1893.

On the question of finance the Commissioners report that the Act of 1871 is satisfactory and efficient. There is one blot in the system of audit which should be remedied. Should a difference of opinion arise between the auditor appointed by the Local Government Board and the water companies the matter in difference may be referred to an arbitrator, but in that case the auditor himself has to fee counsel and pay his own costs. The Comissioners think that provision ought to be made for paying the expenses of the auditor out of public money; he is a public officer and he should not be discouraged from asserting his views in opposition to the companies by the prospect of being out of pocket if he does so.

A considerable part of the report is taken up with a review of the evidence given on the waste of water, the control of which, as the Commissioners point out, is rather in aid of than against the companies. Lately much has been done in the way of detecting waste by the use of Deacon's water meters. By this means the exact places in which waste is taking place can be localised and the necessary remedies applied. Formerly a very large proportion of the waste was due to defective fittings, but some of the companies by careful testing of fittings before they are supplied have succeeded in reducing the amount of waste to a very great extent. Thus the New River Company have induced 95 per cent. of their new customers to adopt fittings which they have examined and stamped as efficient. In some cases the waste of water has, the Commissioners think, been wholly indefensible—as, for example, when taps are left running all night or are even cut off and removed bodily. A great deal of water has been wasted in poor neighbourhoods, in which the agents who manage the properties have put in fittings which satisfy the letter of the regulations but which soon become inefficient, and the magistrates to whom the enforcement of the regulations is committed do not impose penalties in cases in which a tap does not leak when it is put up although its construction is so imperfect that it must necessarily soon prove inefficient. Some of the nothern towns, the Commissioners point out, have adopted a regulation by which it is necessary that fittings must be tested before they are put up. In the case of Bradford this change has resulted in a decreased consumption of water. The regulations came into force in the year 1893 when the average amount supplied per head was 24 gallons per day and this amount has now been reduced to a daily average of 17¼ gallons. Although the water companies have legal power to cut off the supply of water when a customer wrongfully causes or permits waste this extreme remedy as a matter of fact is rarely resorted to and then only after repeated notices have been sent. Under the Act of 1871 the London County Council have power to require an occupier to provide proper fittings; they have, however, never used that power, and the local sanitary inspectors have no interest in limiting the waste of water. In these circumstances the Commissioners think that the water companies might rightly be empowered to require that all fittings should be approved and tested by themselves and should be renewed and repaired from time to

time on their requisition and brought into conformity with properly framed regulations.

With respect to the question of cisterns the Commissioners think that the regulations require intelligent revision and fresh legislation. According to the Metropolis Water Act of 1871 a cistern is a "fitting," but neither the regulations nor the special Acts of the companies prescribe the size or the character of the cisterns which the companies are entitled to require before they lay on water to a house for the purpose of a constant supply. [The Commissioners pending a judicial decision of the question decline to offer an opinion as to the meaning of Sections 24, 30, and 33 of the Metropolis Water Act of 1871. They say that they were not informed of any provisions which compel customers to provide houses with cisterns where a constant supply is not given, although it is obvious that cisterns are essential where the supply is intermittent.] Some of the local authorities had caused cisterns to be removed on the ground that they contained much dirt and even dead mice. The Commissioners give it as their opinion that a company should have the power to require that a properly constructed cistern approved by them and of dimensions proportionate to the number of persons likely to inhabit the house should be placed, and should remain in good order and repair, in any house supplied with water, and that the local authorities as guardians of the public health should be empowered to see that the cisterns are properly cleansed and that their construction is modified so as to prevent the fouling of the water, but they should not have the power to order the removal of a cistern unless it is to be at once replaced by another one.

The Commissioners make an important recommendation with respect to information which they think ought to be furnished by the water companies to the Local Government Board. At the present time there is no obligation on the part of the companies to give any information either with regard to their works or their water-supply. All the information at present published by the Water Examiner is supplied as a matter of courtesy, yet these reports have been used in the course of inquiries by Parliamentary Committees and Royal Commissions as authoritative sources of information. The Commissioners report that power should be given to the Local Government Board to prescribe periodical returns containing such information or to call for such plans or documents as might from time to time appear to them necessary or desirable, and it should be a statutory duty of the companies to supply these returns, statements, and plans. The Commissioners further report that in their opinion the power of the Local Government Board to make inquiries might be usefully extended; for example, at the present time the companies are not under control with regard to making any provision for the future wants of their customers. The water undertakings should have reserve capacity of supply in excess of their average wants in order to meet a case of emergency. They ought to exercise prudent forethought in increasing the reservoirs and filter beds and in making provision for the necessary additional pumping power so that the work should all be carried out in time to ensure that the supply may always be constant and efficient. The recommendations which the Commissioners make on the subject of control are in their opinion equally applicable and desirable whether the water companies' undertakings are purchased or not. The Commissioners point out that some witnesses had suggested that in the case of purchase of the undertakings by a public body that body might be left entirely without control because representatives of the people could be thoroughly trusted. The Commissioners, however, without expressing the least distrust of any representative or other authority, think that the measures of control which they suggest should certainly be kept alive in the event of the purchase of the undertakings of the companies by a public authority, although it might be necessary that the machinery to be used for exacting the penalties might have to be altered in the case of dealing with a public authority.

NEWPORT AND MONMOUTHSHIRE INFIRMARY.—The annual meeting of this institution was held on Jan. 31st under the presidency of Lord Tredegar. The financial statement showed that the income amounted to £3296 and the expenditure £2686. It was stated that during the past year Dr. Garrod Thomas and Mrs. Thomas had contributed a fourth donation of £1000 to the new hospital building fund.

THE PHYSIQUE OF THE BOERS.

(FROM A CORRESPONDENT.)

THERE can be no doubt that the Boers have displayed much greater prowess and power as men of war than was ever anticipated. The physical and psychical causes of this capacity for fighting come well within the province of discussion in these columns, for they are scientific rather than political problems. Indeed, the successes of the Boers confirm and enforce all that has been said and attempted to be taught in regard to the preservation of public health. There is not a sanitary reformer who could not deduce many an object-lesson from the history of the present unfortunate campaign. What, after all, is the extremely simple basis on which good sanitation rests? To ensure healthy lives we require plenty of pure air, constant out-door exercise, simple but sufficient food, enough warm clothing, and, in face of the growing prevalence of nervous disease, freedom from gnawing worry and anxiety as to the morrow's bread. The sanitary reformer may also claim to be an advocate of temperance in all things and especially in regard to the consumption of alcohol. This being the ideal, how do the Boers compare with the inhabitants of Great Britain? With but few exceptions the Boers live in the open country. Indeed, it has been said that the ambition of the Boer is to be surrounded by so vast a tract of land that he cannot see the dwelling of his nearest neighbour. Then his occupations are all out-door occupations. He must ride enormous distances to go to church, to do his shopping, to fetch a medical man, or to pay a visit. For his food supply he depends to some extent on hunting, and here we have again a health-giving occupation, to say nothing of the incidental fact that this familiarises him with the use of a gun and enables him to become an excellent marksman. But over and above all these considerations there is the all-important fact that he is exempt from the health-wearing trials alike of wealth and of poverty. Neither surfeited by luxurious living nor starved for want of the necessaries of existence, the Boer leads a life of true temperance free from over-indulgence and from the excess of abstinence. But what in the long run often proves more fatal than, for instance, too much or too little food is that terrible strain on the nervous system due to the want of leisure, the want of freedom from anxiety caused by our overwrought civilisation and the acuteness of the struggle for existence. The Boer mind is not torn and harassed by the ambitious hope of wealth or the constant dread of bankruptcy, of poverty, debt, and starvation. His is an easy-going life. He feels quite safe as to the morrow's existence. His land is not over-populated but under-populated. There is plenty of room for him and his family, however numerous. He has no fear of the bailiff or of the debtors' court. He does not tremble at the thought that he may be discharged from his employment or that the formation of some big trust or syndicate may ruin his business. He has but little experience of the luxuries and the extravagant modes of living prevalent in our western civilisation, but he knows nothing either of our sordid poverty, of our overcrowding, and of all the insalubrious and degrading conditions bred of misery that accompany and put to shame our wealth. It would not be possible to find a "submerged tenth" among the Boers. Therefore the Boers are free from those nerve disorders that so largely contribute to destroy the health of the populations in the great commercial centres.

In so far as they are of Dutch descent, the Boers should be small. The French blood which is mingled with that of the Dutch would not tend very considerably to increase the height of the Boer. The French, though taller than the Dutch, are not so tall as the English. Yet the Boers of to-day are taller, stronger, and possess a more powerful physique than the English. It is quite a common occurrence to meet a Boer six feet six inches in height. Indeed, it has been said that the average height of the Boer is six feet two inches. This is undoubtedly a gross exaggeration, but that such an exaggeration is possible tends to show how striking is the impression made by the tall stature of the Boers. All travellers bear witness to their magnificent physique, especially those who have been among the real Boers, that is to say, those who live in the rural districts well away from the railway lines. The Boer who has taken to town

life and acquired town vices may degenerate like other people, but this is not of frequent occurrence. Even those who do live in towns often preserve their primitive and simple methods of existence. President Kruger himself is a good example. He still keeps up the pastoral habit of going to bed at eight o'clock in the evening and he is up by five o'clock in the morning.

But apart from the flesh and bone, the big, strong frames, and the hard muscles developed by the healthy constant out-door exercise, the Boers have practical freedom from the diseases due to alcoholism and vice. They are not total abstainers, but they are remarkably sober and drunkenness is rare among them. Equally important from the health point of view is the fact that the Boer is essentially a moral man. Indeed, even were it otherwise, his isolated life in far-off farms offers no opportunities for contracting the diseases connected with vice. On the other hand, how often are British soldiers punished for drunkenness and invalided through venereal disease. Not only is almost every Boer physically fit to take the field and fight for his country, but he is a stronger, healthier, and bigger man than even those who have been selected by medical examination as fit to serve in the British army. If the entire male population of our country, without any sort of selection, from the age of 14 to 60 years, were made to stand forth they would present a sorry spectacle as compared with a similar crowd of Boers. Let any one, for instance, take his stand in a crowded street in the centre of Glasgow and note how many men will pass him whose backs are straight, who have expanded chests and healthy complexions. Again in Lancashire, let the observer note the dwarfed figures and pallid faces of the thousands of factory women as they leave the mills. And London, with its West-end slums festering under the shadow of neighbouring mansions, and its boundless stretch of East-end misery, what sort of army would this huge metropolis produce if every male inhabitant were called under arms? In dealing with the sanitary aspect of the question it would be most misleading to compare the British army with the Boers. The British army is an infinite minority of the British nation and is composed of men specially selected for their physique. With the Boers it is the entire nation that has risen to fight against us; and the fact that primarily interests sanitarians is that there has been no selection among the Boers, for all, practically speaking, are physically fit. Surely there is something in this marvellous fact to give us pause and to make us think seriously as to whether we are doing all we can to ensure that our people shall possess and preserve those physical qualities without which our empire cannot be maintained. If our disasters render us no other service they ought to contribute powerful arguments in favour of still more extensive sanitary reforms. Not but that we possess certain sanitary advantages which do not exist among the Boers. It may even be said that they have no artificial sanitation whatsoever. Their sanitation is of the natural order. They have no drains, no sewers, no isolation hospitals, no compulsory notification of infectious diseases, no disinfecting processes, and there is very little medical aid available, for medical advisers are few and far between. In England we possess all these advantages, and what with workhouse infirmaries, hospitals, and numerous charitable institutions, there is ample provision of medical and surgical aid even for the poorest sections of the population. The Boers, on the contrary, often suffer for want of such facilities. The difficulty of obtaining the assistance of competent surgeons has resulted in the loss of lives that might otherwise have been saved, more especially when Boer women give birth to their first child. Nevertheless, and as a rule, these women are so strong and healthy that they need but little assistance, and it often happens that a day or two after giving birth to a child they are up and busy attending to their domestic duties. Again, there have been small epidemics, notably of diphtheria, and these were doubtless due to the total absence of any sort of precautions. Neighbours will sit in the room of the patient, there is no attempt at isolation or disinfection, and of course the disease spreads. The women as well as the men have a great amount of outdoor work and exercise, and it is quite certain that very many lives that in England would be saved by medical treatment, precautions, and care are lost in the Transvaal or Orange Free State. Consequently those who survive possess strong constitutions and this also helps to explain why the Boers are such a remarkably fine race.

All these facts should induce us to look at home and make us inquire what recruiting grounds still remain where we may find the raw material for the constitution of an effective British army. The most terrible of all the disasters experienced during this war has been the loss of so large a number of Highlanders at Magersfontein. The question naturally arises, how are these Highlanders to be replaced? In too many instances their homes exist no longer. The crofter's cottage has been levelled to the ground. The hardy race of inhabitants from which our Highland regiments used to be recruited have been driven away. Many of them have come to seek employment in the large towns where the process of physical degeneration soon produces its disastrous effects. It will be no easy matter to reconstitute the Highland regiments. Much the same may be said of the British agricultural population. Here also the tendency is to gravitate towards the large towns. The decadence of British agriculture to some extent involves the decadence of the fighting qualities of the British race. It stands to reason that poverty in a large town is far more destructive of health and physical strength than poverty in a rural district. Though the English agricultural labourer is very poor, his wages ranging from 9*s.* to 16*s.* a week, nevertheless, the healthy nature of his occupation makes him the better man physically, and he is more likely to possess the necessary stamina than the worker in the town, even though the latter earns higher wages. This is a very grave question and it involves a very deep political problem—namely, whether the great commercial nations do not run a serious risk of being defeated on the battlefield by those nations the bulk of whose population is still employed in agricultural pursuits.

Victory in modern warfare will rest with those who possess the best marksmen; or, physically speaking, those who have the strongest nerve. To keep cool, to take deliberate, steady aim, these are the qualities required in action. Then between the actual fighting great mobility is necessary, and the troops that can best endure the fatigue of long forced marches have the greater chance of being at the right place at the right moment. For these purposes the every-day occupation of the agriculturist is a far better preparation than the labour of the town worker. Let anyone study the distribution of the population in Great Britain and he will at once see the disadvantage of our home condition and the advantage which in this respect the Boers possess. The moral is very simple. The efforts of legislation and of philanthropy should be directed first to the endeavour to get as large a section of the population as possible back on to the land. Secondly, we should strive to make town life as similar to country life as is possible. Therefore our streets should be as broad and our houses surrounded with as much open space as circumstances will admit. All accumulations of filth which corrupt the atmosphere of towns should be removed with the utmost celerity; and means of communication should be so multiplied and reduced in cost as to enable townsfolk to enjoy the maximum of exercise in the open country. If we must fight for our empire such measures are indispensable.

To recover from the blows we have received we must calmly consider the whole situation. Our national prejudices, our patriotic aspirations, the affection we bear for those who are at the front, may be very worthy, natural, and respectable sentiments, but there is no room for them in a scientific investigation. We may have very good ethical and sentimental reasons for wishing that lead should be lighter than snow, but they will not alter the verdict given by the scales; and the true patriot to-day is the man who dares to look facts in the face and can judge and weigh them impartially.

ROYAL UNITED HOSPITAL, BATH.—The annual meeting of this institution was held on Jan. 29th under the presidency of the Mayor. The report stated that 1287 in-patients had been admitted and that 8941 out-patients had been treated, being an increase in each case as compared with 1898. The financial statement showed that the income amounted to £7421 and the expenditure to £7768. The report alluded to the services rendered to the hospital by the late Mr. H. Culliford Hopkins, first as house surgeon and then, since 1876, as registrar and curator of the museum, and added that his name would be handed down as one of the most zealous of workers for the hospital.

Obituary.

SIR THOMAS GRAINGER STEWART, M.D., F.R.C.P. EDIN., LL.D. ABERD., F.R.S.E. EDIN.,

PROFESSOR OF PRACTICE OF PHYSIC AND OF CLINICAL MEDICINE IN THE UNIVERSITY OF EDINBURGH AND PHYSICIAN-IN-ORDINARY TO THE QUEEN IN SCOTLAND.

BY the death of Sir Thomas Grainger Stewart the profession in Scotland has lost one of its most prominent and best known of its members. He died on Saturday morning, Feb. 3rd, the end coming sooner than had been anticipated. For months past he had been laid aside from active work; indeed, since his return from the Congress on Tuberculosis in Berlin he had been more or less of an invalid, confined to the house or his room, and only occasionally able to drive out. Years ago he suffered from more than one attack of acute rheumatism, and it was commonly understood that his heart had not passed through the ordeal quite unscathed; still, he showed little signs of diminished vigour until recurring attacks of influenza seem to have disturbed the balance and initiated a progressive impairment which skill and care could not arrest.

Thomas Grainger Stewart was a native of Edinburgh and was born in September, 1837, so that at the time of his death he was in his sixty-third year. He was educated at the Royal High School of Edinburgh and the University of Edinburgh, and graduated as a doctor of medicine in 1858. After graduation he visited some of the continental schools and on his return acted as house physician under the university professors of clinical medicine in the old Royal Infirmary. At the early age of 25 years he was elected pathologist to the Royal Infirmary and began lecturing on pathology in the extra-mural school at Surgeons' Hall. It was during his tenure of office in this capacity that he did work on the kidney which was incorporated in his book, "A Practical Treatise on Bright's Diseases of the Kidneys," and which has ever since associated his name with kidney affections. He was at the same time a physician to the Hospital for Sick Children. When the chair of Pathology became vacant in 1869 he was a candidate for it, but failing in his application he resigned the post of pathologist to the infirmary, his lectureship and his appointment at the Children's Hospital, and was elected to the post of junior physician in the infirmary. In 1873 he began to lecture on the Practice of Physic in the extramural school, the lecture-room he occupied being opposite the entrance to the infirmary. He at once became the popular lecturer on his subject and his class-room was filled. In the wards of the infirmary also he attracted a large number of students to his cliniques. As a clinical teacher he was clear and systematic and conducted the class by means of question and answer, while the students in rotation listened to abnormal sounds in the patient's chest or otherwise examined him. As a systematic lecturer he was equally clear and precise, so that his doctrine was easily followed even by the junior student. Many circumstances, which need not be detailed, of the Edinburgh Medical School at that time promoted the popularity of a teacher with the gift of clear and easy exposition which characterised Dr. Stewart even in those days. In this respect there is little doubt that he made a marked impression on the teaching of the school, and that the hope that he was wont to express that he would be remembered in the school as having done something to advance the teaching of clinical medicine has been fully realised. After having been extra-mural lecturer for three years the chair of Practice of Physic became vacant by Professor Laycock's death and Dr. Stewart was fortunate in being chosen to succeed him. His success as an extra-mural lecturer was undoubtedly the claim which weighed strongest with the curators of the chair. He thus became the successor of Cullen, Gregory, and Allison. With his appointment to the chair the practice of physic in the University assumed a changed aspect and comparatively few students went for systematic medicine outside the walls of the University class-room. With the increase in the number of students coming to the Edinburgh school which took place soon after that time the class of practice of physic became one of the largest in the University and under the strong hand of Dr. Stewart it never lost its position. From that time consulting practice and honours came to him. He succeeded Sir Robert Christison as Physician-in-Ordinary to the Queen in Scotland; from 1890 to 1892 he was President of the Royal College of Physicians of Edinburgh, and in 1894 he was created a knight. When the British Medical Association was invited to hold its annual meeting in Edinburgh in 1898 Sir Thomas Grainger Stewart was nominated by the local profession to the presidential chair. In this capacity, during the meeting in Edinburgh, he showed to the greatest advantage, all acknowledging that he performed the duties of the post with distinguished success and with a dignity, suavity, and eloquence which had seldom been equalled.

In addition to his book on Bright's disease, to which reference has already been made, he published several monographs and lectures on diseases of the nervous system and on important symptoms—as giddiness and albuminuria. His latest published contributions were some chapters on nervous diseases in the "System of Medicine," edited by Professor Clifford Allbutt. But of all his writings it was his early work upon kidney disease which attracted most attention and which brought him most reputation.

In politics Sir Thomas Grainger Stewart was a Liberal; as a church-man he was a staunch Presbyterian and an office-bearer in St. George's Free Church. He took an active interest in many religious movements and shortly before his death had been re-appointed president of the Edinburgh Medical Missionary Society, having already occupied that position for five years.

In addition to his qualities as a physician, he was a man of wide and general culture, with strong historical and archæological leanings and considerable literary tastes and aspirations. He was endowed with a fine presence and had a gift of ready and graceful speech which made him a valuable ally in controversial times especially when public advocacy of a question was required.

Amongst other honours he was an honorary Fellow of the Royal College of Physicians of Ireland, an M.D., *honoris causâ*, of the University of Dublin and of the Royal University of Ireland; and an LL.D. of Aberdeen University.

The funeral took place on Feb. 7th, from St. George's Free Church to the Dean Cemetery, and the procession was attended by representatives of the University of Edinburgh, by the Fellows of the two Edinburgh Colleges in their official capacity, and by many students, and a large concourse of the general public and his friends and patients.

An old house physician to Sir Thomas Grainger Stewart sends us the following graceful testimony of his indebtedness to his old chief:—"In the Edinburgh Royal Infirmary no post was more sought after or more highly valued than that of resident physician to Sir Thomas Grainger Stewart, and it was indeed deemed a high honour to be selected by him out of the 100 clinical clerks who daily thronged his wards. His house physicians had the privilege of being admitted into the closest intimacy and enjoyed his fullest confidence. They all became his lifelong friends and their future careers were followed by him with the deepest interest. He was an ideal chief—kind, considerate, and ever ready to help and advise. Very rarely did he miss a day in going round the wards he loved so well. None of his house physicians will forget the keenness with which, after the ward visits were over, he discussed with them the various points of interest in connexion with the cases he had just seen, or the valuable lessons they then learnt as the fruit of his ripe and varied experience. Sir Thomas Grainger Stewart was keenly interested in the clinical progress of his clerks and was particularly well pleased if a case had been well recorded as showing that the student had done his work intelligently and conscientiously. The keynote of his clinical teaching was *method*. Whatever the nature of the case he never permitted any deviation on the part of his students from the exhaustive method of case-taking which he had himself introduced into the University clinical wards, and he frequently inculcated the necessity of pursuing the same method of observing all the various systems of the body in dealing with private patients, and so reducing to a minimum errors of omission in diagnosis. A favourite method of his in ward-teaching was to take a doubtful case admitting of more than one possible diagnosis and then select two or more students to take up and support the rival views and debate the question before the other clerks whose interest was in this way invariably aroused. He never failed to impress upon his pupils the importance of observing the general constitution and temperament of a patient before

SIR THOMAS GRAINGER STEWART, M.D., F.R.S. EDIN.,

PHYSICIAN-IN-ORDINARY TO THE QUEEN IN SCOTLAND; PROFESSOR OF THE PRACTICE OF MEDICINE AND CLINICAL MEDICINE IN EDINBURGH UNIVERSITY; AND LATE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

proceeding to study the particular ailment. His clinical lectures in the Royal Infirmary were always thoroughly practical, and the lecture theatre was invariably crowded. His students, and especially his old house physicians who knew him best, had an unbounded admiration for their chief. They, more than other men, could appreciate his singularly attractive personality, his high attainments, his magnificent mental grasp and medical acumen. He was truly endowed with a large share of what he himself used to characterise as 'the mens medica.' We all feel that to-day we mourn the loss of a great physician, a man worthy of the best traditions of Scottish medicine, and whose place it will be hard indeed to fill."

BERNARD EDWARD BRODHURST, F.R.C.S. ENG.

MR. BERNARD EDWARD BRODHURST was born at the Friary, Newark, on Feb. 4th, 1822. He obtained the Membership of the Royal College of Surgeons in 1844 and subsequently spent five years at the medical schools of Paris, Vienna, Berlin, Bologna, Florence, and Rome. He reached Rome shortly before the entry of Garibaldi in 1849, and attended the French wounded after Marshal Oudinot's repulse in April of that year. For this service he received the Cross of the Legion of Honour and is said to have been offered a baronetcy by Lord Palmerston. On returning to London in 1852 Mr. Brodhurst was elected a surgeon on the staff of the Royal Orthopædic Hospital. In 1859 he passed the examination for the Fellowship of the Royal College of Surgeons of England. In 1862 he was elected assistant surgeon to St. George's Hospital, but resigned this post after some years on account of his increasing practice preventing him from giving enough time to the affairs of the hospital. He was, however, elected surgeon with orthopædic beds.

Mr. Brodhurst was the author of several works upon orthopædic surgery, among which were "Curvatures and Disease of the Spine," "On Anchylosis," and "Lectures on Orthopædic Surgery." He also contributed articles to Holmes's "System of Surgery" and Reynolds's "System of Medicine."

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Johannes von Steinau-Steinrück of the Bethany Hospital, Berlin, of heart disease, in his fiftieth year.—Professor Albert Mooren of Düsseldorf, whose name is known not merely as an ophthalmologist but as a historian.—Dr. William B. Canfield, Lecturer on Medicine in the Maryland University, Baltimore.—Dr. Axtell, Lecturer in the University of Denver.—Dr. William A. Hammond, formerly Professor of Nervous Diseases in Bellevue Hospital Medical College, New York.—Dr. Antonio Valenti, Lecturer on General Pathology in the University of Rome.—Dr. Orsi, Professor of Clinical Medicine in the University of Pavia.—Dr. Brunetti, formerly Professor of Pathological Anatomy in the University of Padua.—The Marquess Andrès del Busto, formerly Professor in the Medical Faculty of the University of Madrid.—Dr. Constantin Voroshiloff, formerly Professor of Physiology in the University of Kazan.

ASYLUM REPORTS.

London County Asylum, Bexley-heath, Bexley (Report for the year ending March 31st, 1899).—The asylum was opened in 1898 and male patients were first received on Sept. 19th. Dr. T. Stansfield, the medical superintendent, states in his report that the patients were "received into what will ultimately be female epileptic and chronic wards, the administrative arrangements for cooking, lighting, bathing, and water-supply all being of a temporary character." The number of patients to be received was at first limited to 240, but this was subsequently extended to 300. "The laundry was in the hands of the contractors and consequently arrangements were made with the Claybury sub-committee for the washing to be done at that asylum. ..... With regard to call-bells, telephones, tell-tales, and fire-alarms these essentials are now being arranged for ..... but in the meantime their absence considerably increases the administrative difficulties and renders the work much more arduous." A fire-brigade has been organised and weekly drills have been regularly held. Up to the end of December, 1898, there were 265 admissions, and all of these, with the exception of eight, were transfers from out-county asylums and from the sister asylums of the county of London. "The character and duration of the disease in the patients transferred were such as to preclude the expectancy of recovery." 40 per cent. of the patients, put down on their transfers as non-workers, have been induced to occupy themselves and thus much valuable work has been done "in the laying-out of airing courts, road-making, gardening, and clearing the land." A large day room served as a recreation room and a chapel for Sunday services. The wide expanse of heath (Dartford Heath) nearly five miles in circumference, immediately adjoining, serves as a beautiful adjunct to the asylum estate and walking parties are sent out over it daily. The asylum sub-committee state in their report that a gate-porter's lodge has been repaired and is put into use, and that plans for the construction of the farm-buildings are being carried out. Two spray baths have been fitted in the female general bathroom, and it has been decided, on the recommendation of the medical superintendent, to have the male general bathroom fitted up entirely with spray baths. A well has been satisfactorily sunk and an ample supply of water is obtained and the necessary pumping plant is being fixed up. The Kent Waterworks Company supplied water during the progress of the above arrangements. The fitting-up of the kitchen and cooking apparatus has been completed, while the electric light installation and the fitting-up of the laundry are rapidly nearing completion. The estate is being completely fenced in, and the land intended for growing crops has been grubbed and steam-cultivated and prepared for planting. "We have from time to time reported," say the committee, "that the sum of £350,000 voted for the building of the asylum would be exceeded. We shall shortly be in a position to state with some amount of precision the probable extra cost and will then report accordingly." In addition to the male patients received arrangements have been made for the reception of 480 females and a further 150 male patients, making the total accommodation 930. The sub-committee have not considered it desirable to provide a cemetery and, there being no accommodation in the local burial-ground, have entered into an agreement with the Plumstead Cemetery authorities for the interment of patients dying in the asylum. The Lunacy Commissioners were approached on the subject of the provision of a crematorium at the asylum, but they considered that public opinion was not yet sufficiently ripe or ascertained to warrant the introduction of cremation into public institutions. The health of the patients has been good and there were but two deaths during the year—one from organic brain disease and one from general paralysis, both being males.

London County Asylum, Horton (Report for the year ending March 31st, 1899).—This is the latest asylum for the County of London and consists of two parts—viz., the Horton (Main) Asylum and the Manor Asylum. The foundations of the Horton (Main) Asylum—which will practically be a duplicate of the Bexley Heath Asylum—were designed for 2000 patients. The time for completion of the superstructure is October, 1900, and its estimated cost was £285,000. Since the building has been in progress certain additions and alterations have been sanctioned—viz., re-arrangement of the accommodation for the medical and female officers, including the provision of a detached nurses' block, at an estimated extra cost of £4500. The fencing of the estate has been carried out at a cost of £3200, and a contract has been entered into for the heating and hot water-supply at a cost of £24,560. The Manor Asylum is a temporary building for 700 patients and is nearly completed. A portion of it has already been opened and is ready for the reception of patients. The water-supply is obtained from a well bored for the purpose, but as a precautionary measure the asylum main has been connected with the district water-supply so that this will be available should the supply from the boring run short. The building is lighted up by gas instead of by electricity as originally intended, and this is supplied by the Epsom Gas Company. A cemetery has been provided on the asylum estate and a site of one acre has been apportioned off and suitably prepared for the purpose. A working colony for epileptic patients has been decided on and the necessary buildings are now in progress of erection for the accommodation of 300 patients and staff. The sub-committee of the asylum reports further details in

progress, and it is believed that part at least of the asylum will be shortly ready for the reception of a limited number of patients.

ROYAL ARMY MEDICAL CORPS FUND.

A MEETING of the Central Committee of the recently formed Fund to supply certain necessaries and comforts to the officers and men of the Royal Army Medical Corps now serving in South Africa was held on Feb. 5th at 11, Grafton-street, Piccadilly, by the kind permission of Sir Dyce Duckworth. Surgeon-General Jameson, the Director-General of the Army Medical Service, occupied the chair and was supported by Surgeon-General Muir, the Deputy Director-General. Letters of apology were read from H.R.H. Princess Christian, Lady Rothschild, Lady Wantage, Lady Priestley, and others for their non-attendance. Among those present were Lady White, Lady Knutsford, Lady (Russell) Reynolds, Lady (Douglas) Powell, Lady Brunton, Lady Savory, Mrs. Barlow, Mrs. John Anderson, Mrs. Butlin, Mrs. Pye-Smith, Mrs. Field, Mrs. Walsham, Mrs. Church, Mrs. Charlton, Mrs. Vesey Holt, Mrs. Berkeley Hill, Mrs. Percy Kidd, Mrs. Arbuthnot Lane, Mrs. Liveing, Mrs. A. H. Morgan, Mrs. Charters Symonds, Mrs. Walsh, Mrs. Alfred Willett, Mrs. Johnston, and Mrs. Jameson. Mr. Charters Symonds described how the formation of the Fund came about and read to the meeting the list of vice-presidents. An executive committee was also appointed, and Mr. Charters Symonds announced that so far the amounts received came to a sum of £214.

Surgeon-General Muir proposed that an appeal for funds should be made both in the daily journals and in the medical press. As regards the former at any rate it was decided that only names should be published and not amounts. Small subscriptions were suggested as being most convenient and it was proposed to ask for one of half-a-crown. Surgeon-General Muir also mentioned that the Indian dhoolie bearers would share in the benefits of the Fund as well as the other members of the Army Medical Corps. This is good news, for these men have done admirable work in the most quiet and unassuming way under very trying circumstances. The work of every member of the Army Medical Corps is trying, but possibly that of a stretcher-bearer is the most so of any. A surgeon attending to the wounded under fire is sustained by the necessity for keeping his head cool and his wits about him, but the transport of a wounded man upon a stretcher under a heavy fire, although it may be exciting, is not inspiriting.

In addition to the names already published we have received the following names of members of the committee, including Vice-Presidents and Executive Committee:—Mrs. Church, Mrs. Frederick Taylor, Mrs. Treves, Mrs. Acland, Mrs. Ambrose, Mrs. Anderson, Mrs. Charlton Bastian, Mrs. Brailey, Mrs. Burnett, Miss Burnett, Mrs. Watson Cheyne, Mrs. Crigan, Lady Mansfield Clarke, Mrs. Dodd, Lady Fayrer, Mrs. Garrett, Mrs. Hensman, Mrs. Berkeley Hill, Mrs. Frank Howard, Mrs. Liveing, Mrs. Marston, Mrs. A. H. Morgan, Lady Priestley, Mrs. Cooper Perry, Mrs. Steele Perkins, Mrs. Knox Shaw, Lady Savory, Lady Felix Semon, Mrs. Richard Symonds, Mrs. Treves, Mrs. Trueman, Mrs. Cooper Wilkinson, and Mrs. Wornum.

It is suggested that local committees should be formed to work in the provinces in harmony with the central committee. As the object of the Fund is to provide various comforts for the members of the Royal Army Medical Corps now at the seat of war it is obvious that money is required. We shall be most happy to receive subscriptions and to acknowledge their receipt in these columns. If every member of the profession were to contribute at least half-a-crown, while those who are blessed with this world's goods contributed several half-crowns, the Fund would soon mount up to a respectable sum.

Although large subscriptions will naturally be eminently useful yet it is to be hoped that very many small subscriptions, representing an equal number of separate subscribers, will be sent in, for this will show the sympathy of the profession as a whole.

Subscriptions may, if desired, be sent to the offices of THE LANCET and will be forwarded by us to the treasurer of the Fund (Mrs. Charters Symonds, 53, Portland-place, W.). All postal orders and cheques should be crossed "Holt and Co." and made payable to R.A.M.C. South Africa Fund. Contributions in kind to be sent to Miss Maxwell-Müller, R.R.C., Honorary Secretary, Royal Army Medical Corps South Africa Fund, 100, Victoria-street, S.W.

SICK AND WOUNDED OFFICERS' SURGICAL AND MEDICAL AID FUND.

THE following are among the subscriptions that have been received to this fund. Additional subscriptions are earnestly requested and may be sent to Messrs. Coutts and Co., Strand, or to the honorary secretary and treasurer, Mr. Arthur Brodrick, at Hampden House, 61, Green-street, W.

	£	s.	d.
Daily Mail (Kipling Poem)	500	0	0
Messrs. S. Neumann and Co....	250	0	0
His Grace the Duke of Abercorn, K.G.... ...	100	0	0
Mr. M. Griffith	100	0	0
Mr. Alfred Harmsworth	100	0	0
Mrs. H. Longueville Jones	100	0	0
Mr. F. A. Hamilton ...	100	0	0
Messrs. Wakley, Editors of THE LANCET	52	10	0
Mayor of Derry	50	0	0
Mr. Victor W. B. Van de Weyer	50	0	0
Lord Ashcombe	50	0	0
Lord Ebury	50	0	0
Lady Haliburton	50	0	0
Mr. H. R. Davies ...	30	0	0
No. 6 Lodge of Friendship, per Mr. John H. Morgan...	26	5	0
Earl of Ducie	25	0	0
Sir James Musgrave ...	25	0	0
Mr. V. Saville	25	0	0
Miss E. Appach	20	0	0
Rev. R. Kinleside ...	20	0	0
A. M....	20	0	0
Mr. J. Denison-Pender	20	0	0
Lord Robert Cecil ...	20	0	0
Miss F. M. Stephens ...	20	0	0
Miss C. Turton	15	0	0
Mr. E. Coles Baker ...	10	10	0
Sir Angus Fraser	10	10	0
Sir Harry B. Poland, Q.C.	10	10	0
Mr. Reginald Cardwell	10	10	0
Miss A. E. Hogan ...	10	10	0
Mr. R. Kay Gray ...	10	0	0
Miss Powys Keck... ...	10	0	0
Miss Emily F. K. Maclean	10	0	0
Mr. J. B. H. Montgomery	10	0	0
Sir Douglas Powell ...	10	0	0
Mr. Alfred D. Acland...	10	0	0
Mr. Granville Lloyd-Baker	10	0	0
Hon. Miss Brodrick ...	10	0	0
Mrs. Burnside	10	0	0
Mr. G. H. B. Caldwell	10	0	0
General E. M. Cherry	10	0	0
Mr. David Gillespie ...	10	0	0
Mr. Gossage	10	0	0
Mrs. Gossage...	10	0	0
Miss Rose E. Greene ...	10	0	0
Major A. E. Hay	10	0	0
Miss P. Hurker	10	0	0
Miss E. Isaac...	10	0	0
Miss E. S. Lomer... ...	10	0	0
Professor J. C. Mahaffy	10	0	0
Miss Robinson	10	0	0
Mrs. Silver	10	0	0

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6711 births and 4719 deaths were registered during the week ending Feb. 3rd. The annual rate of mortality in these towns, which had decreased from 30·9 to 22·6 per 1000 in the four preceding weeks, further declined last week to 21·2. In London the rate was 19·6 per 1000, while it averaged 22·3 in the 32 large provincial towns. The lowest death-rates in these towns were 12·6 in Derby, 13·9 in Croydon, 14·3 in Burnley, and 14·4 in West Ham. The 4719 deaths in these towns included 427 which were referred to the principal zymotic diseases, against numbers declining from 578 to 428 in the six preceding weeks; of these 121 resulted from whooping-cough, 110 from diphtheria, 83 from measles, 40 from diarrhœa, 38 from "fever" (principally enteric), 33 from scarlet fever, and two from small-pox. No fatal case of any of these diseases occurred last week either in Derby, Birkenhead, Huddersfield, or Gateshead; in the other towns they caused the lowest death-rates in Croydon, Brighton, Nottingham, and Sunderland, and the highest rates in Wolverhampton, Salford, Preston, and Sheffield. The greatest mortality from measles occurred in Plymouth, Wolverhampton, Preston, and Sheffield; from scarlet fever in Halifax; and from whooping-cough in Wolverhampton, Liverpool, Salford, and Oldham. The mortality from "fever" showed no marked excess in any of the large towns. The 110 deaths from diphtheria included 46 in London, 21 in Sheffield, five in Leicester, and four in West Ham. Two fatal cases of small-pox were registered last week in Hull, but not one in any other of the 33 large towns. There were 21 cases of small-pox under treatment in the Metropolitan Asylums Hospitals on Saturday last, Feb. 3rd, against 18, 21, and 24

at the end of the three preceding weeks; no new cases were admitted during the week, against 10, five, and four in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2179, against numbers decreasing from 3578 to 2287 at the end of the 11 preceding weeks; 174 new cases were admitted during the week, against 180, 207, and 190 in the three preceding weeks. Influenza was certified as the primary cause of 109 deaths in London. The deaths referred to diseases of the respiratory organs in London, which had decreased from 1221 to 490 in the four preceding weeks, further declined to 432 last week, and were 46 below the corrected average. The causes of 72, or 1·5 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Plymouth, Cardiff, Salford, Leeds, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Preston, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23·0, 23·3, and 23·4 per 1000 in the two preceding weeks, further rose to 23·7 during the week ending Feb. 3rd, and exceeded by 2·5 per 1000 the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 16·6 in Paisley and 20·5 in Leith to 30·7 in Dundee and 40·5 in Perth. The 733 deaths in these towns included 25 which were referred to measles, 11 to scarlet fever, nine to diphtheria, eight to whooping-cough, eight to diarrhœa, and five to "fever." In all 66 deaths resulted from these principal zymotic diseases, against numbers increasing from 64 to 81 in the four preceding weeks. These 66 deaths were equal to an annual rate of 2·1 per 1000, which was 0·2 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of measles, which had been 32 in each of the two preceding weeks, declined last week to 25, of which 21 occurred in Glasgow and two in Dundee. The deaths from scarlet fever, which had been eight in each of the two preceding weeks, increased to 11 last week, and included nine in Glasgow. The fatal cases of diphtheria, which had risen from three to seven in the four preceding weeks, further increased last week to nine, of which three were registered in Glasgow and two in Aberdeen. The deaths resulting from whooping-cough, which had been eight in each of the two preceding weeks, were again eight last week, and included three in Glasgow, two in Edinburgh, and two in Perth. The fatal cases of diarrhœa, which had been seven and 23 in the two preceding weeks, declined again last week to eight, of which five were recorded in Glasgow. The five deaths referred to different forms of "fever" were all registered in Glasgow, and showed an excess of two over the number in the preceding week. The deaths referred to diseases of the respiratory organs in these towns, which had declined from 253 to 172 in the five preceding weeks, rose again to 212 last week, but were 70 below the number in the corresponding period of last year. The causes of 49, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had decreased from 50·3 to 38 6 per 1000 in the four preceding weeks, further declined to 35·5 during the week ending Feb. 3rd. During the past four weeks the death-rate in the city has averaged 41·9 per 1000, the rate during the same period being 24·4 in London and 23·3 in Edinburgh. The 238 deaths registered in Dublin during the week under notice were 21 below the number in the preceding week, and included 12 which were referred to the principal zymotic diseases, against 31, 22, and 10 in the three preceding weeks; of these four resulted from measles, three from diphtheria, two from "fever," two from diarrhœa, one from scarlet fever, and not one either from small-pox or from measles. These 12 deaths were equal to an annual rate of 1·8 per 1000. the zymotic death-rate during the same period being 1·8 in London and 1·0 in Edinburgh. The deaths referred to measles, which had declined from 18 to five in the three preceding weeks, further fell last week to four. The fatal cases of diphtheria, which had been three, two, and one in the three preceding weeks, rose again to three last week. The deaths from "fever," which had decreased from five to one in the four preceding weeks, rose again to two last week. The mortality both from scarlet fever and from diarrhœa showed an excess over that recorded in the preceding week. The 238 deaths in Dublin last week included 31 of infants under one year of age and 78 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed a decline from the number in the preceding week. Eight inquest cases and five deaths from violence were registered, and 90, or more than a third, of the deaths occurred in public institutions. The causes of 10, or more than 4 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING 1899.

Complete statistics relating to sickness and mortality during the year 1899 in each of the 43 sanitary areas of London are summarised in the accompanying table. The mortality figures relate to the deaths of persons actually belonging to the various sanitary areas and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various sanitary areas in which the patients had previously resided. With regard to the notified cases of infectious diseases in London during 1899 it appears that the proportion of persons reported to be suffering from one or other of the nine diseases shown in the accompanying table was equal to 9·3 per 1000 of the population, estimated at 4,546,752 persons in the middle of the year. In the three preceding years the rates were 11·1, 10·2, and 8·3 per 1000 respectively. Among the various sanitary areas the lowest rates were 5·0 in St. Giles, 5·1 in St George Hanover-square, 5·3 in Strand, 5·4 in St. Martin-in-the-Fields, 6·1 in Kensington, and 6·3 in Hampstead; the highest rates were 12·9 in Fulham and in Greenwich, 13·4 in Bermondsey and in Lewisham (excluding Penge), 13·6 in St. George Southwark and in Rotherhithe, and 15·4 in Plumstead. The prevalence of small-pox in London showed a further decline during 1899, the new cases notified being only 29, against 979, 225, 104, and 32 in the four preceding years; of these three belonged to Islington, three to Camberwell, and two each to Marylebone, Hackney, Whitechapel, Limehouse, and Poplar sanitary areas. The number of small-pox patients admitted into the Metropolitan Asylums Hospitals during 1899 was 18, and seven remained under treatment at the end of the year. The prevalence of scarlet fever in London during 1899 showed a slight increase upon that recorded in the preceding year, the number of cases notified being 18,094, against 25,647, 22,850, and 16,894 in the three preceding years; this disease was proportionally most prevalent in Fulham, St. Olave Southwark, Rotherhithe, Greenwich, Lewisham (excluding Penge), and Plumstead sanitary areas. During the year under notice 13,641 scarlet fever patients were admitted into the Metropolitan Asylums Hospitals, against 15,982, 15,256, and 12,480 in the three preceding years; the number of cases under treatment, which had been 3506 and 2883 respectively at the end of the two preceding years, had further declined to 2797 on Dec. 30th last. Diphtheria showed a slightly increased prevalence during 1899, the cases notified being 13,692, against 13,192 and 11,855 in the two preceding years; this disease showed the highest proportional prevalence in St. Saviour Southwark, St. George Southwark, Newington, Bermondsey, Camberwell, and Lewisham sanitary areas. The Metropolitan Asylums Hospitals contained 1239 patients at the beginning of 1899; 9569 cases were admitted during the year, and 1679 remained under treatment at the end of December last. The prevalence of enteric fever in London during the year under notice considerably exceeded that recorded in any recent year, the number of notified cases being 4456, against 3103 and 3024 in the two preceding years; among the various sanitary areas this disease was proportionally most prevalent in St. James Westminster, London City, Bethnal Green, Limehouse, Whitechapel, and Poplar. The number of enteric fever patients admitted into the Metropolitan Asylums Hospitals during 1899 was 1835, against 939 and 1116 in the two preceding years; and 406 cases remained under treatment at the end of December last. Erysipelas showed the highest proportional prevalence in Holborn, St. Luke, Shoreditch, Bethnal Green, St. George-in-the-East, Newington, and Rotherhithe sanitary areas. The 330 notified cases of puerperal fever showed an excess of 83 over the number recorded during 1898; 32 belonged to Islington, 27 to Lambeth, 19 to Hackney, 19 to Bethnal

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING THE YEAR 1899.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1899.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,546,752	29	18,034	13 692	14	456	69	330	5608	15	42,307	9·3	3	2141	338	1945	1717	2	758	1	4181	11,147	2·46	87,530	19·3	165
West Districts.																										
Paddington	128,794	—	334	205	1	98	1	7	148	—	844	6·6	—	6	5	29	43	—	9	—	106	198	1·55	2065	16·1	151
Kensington	174,899	—	444	260	1	111	17	11	210	—	1054	6·1	—	24	10	43	61	—	24	—	101	265	1·53	3054	17·7	180
Hammersmith	106,785	—	439	191	1	115	—	12	109	—	867	8·0	—	22	13	25	46	—	25	—	101	230	2·11	2058	19·0	183
Fulham	130,720	1	847	528	—	110	1	13	179	4	1583	12·9	—	68	33	59	54	—	25	1	183	423	3·23	2507	19·2	189
Chelsea	96,721	—	282	238	—	64	4	9	83	1	681	7·1	—	18	8	26	71	—	18	—	64	205	2·13	1893	19·6	164
St. George Hanover-square	80,876	—	198	91	—	46	—	2	73	—	410	5·1	—	17	7	12	14	—	9	—	29	88	1·09	1142	14·2	129
Westminster	52,117	—	200	101	—	44	1	—	56	—	402	7·7	—	17	5	10	5	—	9	—	39	85	1·64	1159	22·3	207
St. James Westminster	21,827	—	49	37	—	34	—	—	22	—	142	6·5	—	3	1	3	6	—	3	—	8	24	1·12	389	17·9	142
North Districts.																										
Marylebone	140,139	2	400	196	—	118	1	6	202	—	925	6·6	1	24	15	36	34	—	26	—	100	236	1·70	2596	18·6	124
Hampstead	80,252	—	289	116	—	45	—	5	52	—	507	6·3	—	22	6	15	11	—	4	—	35	93	1·16	926	11·6	129
St. Pancras	244,548	—	982	578	—	246	—	13	311	1	2011	8·2	—	102	25	111	142	—	42	—	231	653	2·69	4948	20·3	178
Islington	348,085	3	1496	710	—	361	2	32	355	3	2964	8·5	—	164	34	126	170	—	48	—	256	798	2·30	6289	18·1	160
Stoke Newington	35,187	—	182	30	—	17	—	7	32	—	268	7·6	—	10	3	6	4	—	5	—	19	47	1·33	446	12·7	103
Hackney	222,571	2	988	709	—	268	5	19	301	—	2292	10·3	—	110	16	89	48	—	35	—	194	492	2·22	3755	16·9	153
Central Districts.																										
St. Giles	37,196	—	76	30	—	24	—	1	55	—	186	5·0	—	16	—	5	1	—	4	—	26	52	1·40	739	19·9	112
St. Martin-in-the-Fields	12,142	—	31	17	—	7	—	1	9	—	65	5·4	—	5	—	1	—	—	1	—	6	13	1·07	189	15·6	233
Strand	23,016	—	66	37	—	12	—	—	17	—	121	5·3	—	6	1	7	—	—	—	—	17	30	1·30	521	22·7	189
Holborn	29,621	1	117	62	—	35	2	1	45	—	264	8·9	—	11	3	6	13	—	7	—	26	66	2·23	737	24·9	226
Clerkenwell	66,068	—	321	196	—	91	1	6	72	—	689	10·5	—	36	13	28	30	—	23	—	70	200	3·04	1492	22·6	193
St. Luke	40,868	—	162	103	—	36	—	—	64	—	365	9·0	—	26	6	10	14	—	6	—	59	123	3·03	1159	28·4	149
City of London	27,986	—	74	57	—	86	1	—	21	—	239	8·6	—	4	1	7	5	—	12	—	9	38	1·36	599	21·5	144
East Districts.																										
Shoreditch	121,071	1	364	373	—	168	6	10	202	1	1125	9·3	—	90	13	65	47	—	25	—	198	438	3·64	2875	23·8	204
Bethnal Green	128,938	—	430	345	—	202	—	19	326	1	1323	10·3	—	98	9	59	45	—	38	—	156	405	3·15	2936	22·8	174
Whitechapel	81,391	2	209	202	4	138	—	5	125	—	685	8·4	1	58	2	27	24	—	15	—	46	173	2·12	1714	21·1	147
St. George-in-the-East	48,560	1	99	104	—	72	—	5	78	—	359	7·4	—	58	3	12	25	—	9	—	59	166	3·44	1312	27·1	200
Limehouse	58,807	2	171	132	—	136	—	3	78	—	522	8·9	—	62	1	34	31	—	22	—	71	221	3·78	1500	25·6	216
Mile End Old Town	113,161	—	294	373	—	138	2	7	149	—	963	8·5	—	52	5	65	48	—	26	—	111	307	2·72	2406	21·3	158
Poplar	170,606	2	420	424	—	277	4	14	230	—	1371	8·1	—	104	10	77	106	—	38	—	247	582	3·41	3762	22·1	176
South Districts.																										
St. Saviour Southwark	24,207	—	91	123	—	11	—	3	33	—	261	10·8	—	21	2	17	10	—	1	—	34	85	3·51	607	25·1	203
St. George Southwark	60,536	1	237	447	1	56	1	2	76	—	821	13·6	—	63	6	63	32	—	8	—	102	274	4·53	1673	27·7	205
Newington	124,166	—	509	728	—	111	—	5	201	—	1554	12·5	—	87	13	104	104	—	23	—	124	455	3·67	2969	24·0	191
St. Olave Southwark	11,098	—	64	32	—	11	—	1	3	—	111	10·0	—	10	2	9	—	—	2	—	6	29	2·61	276	24·9	147
Bermondsey	85,835	—	402	543	3	110	1	3	88	—	1150	13·4	—	68	10	88	29	1	16	—	82	286	3·46	2063	24·1	187
Rotherhithe	41,050	—	256	160	1	54	—	2	83	—	556	13·6	—	14	11	32	14	1	11	—	32	115	2·80	865	21·1	170
Lambeth	308,108	1	1014	1122	1	220	10	27	336	3	2734	8·9	—	170	25	158	130	—	50	—	286	819	2·65	5894	19·2	158
Battersea	174,996	—	723	609	—	162	—	14	208	—	1716	9·8	—	105	14	62	52	—	38	—	116	387	2·22	2910	16·7	162
Wandsworth	209,655	—	911	617	—	127	1	13	240	—	1909	9·1	—	59	9	68	65	—	18	—	176	395	1·89	3203	15·3	153
Camberwell	264,817	3	1144	1241	1	176	4	19	259	—	2847	10·8	—	130	19	160	86	—	33	—	239	667	2·52	4502	17·4	158
Greenwich	182,513	1	1206	684	—	167	2	14	271	1	2346	12·9	—	127	17	73	53	—	30	—	203	503	2·76	3415	18·8	167
Lewisham (excluding Penge)	91,027	1	580	432	—	58	1	8	82	—	1212	13·4	1	14	6	68	12	—	11	—	91	203	2·23	1478	16·3	143
Woolwich...	41,542	1	167	130	—	27	—	4	28	—	357	8·6	—	13	4	21	13	—	5	—	45	101	2·44	879	21·2	163
Lee	40,219	—	195	135	—	21	—	2	29	—	382	9·5	—	25	4	14	9	—	4	—	27	83	2·06	606	15·1	141
Plumstead	64,031	—	708	182	—	25	1	5	64	—	985	15·4	—	3	6	16	10	—	—	—	51	86	1·35	914	14·3	124
Port of London	—	4	2	10	—	21	—	—	2	—	39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 339 cases of membranous croup.

† Including deaths from membranous croup.

Green, 19 to Camberwell, 14 to Poplar, 14 to Battersea, and 14 to Greenwich sanitary areas.

During the year under notice the deaths of 87,530 persons belonging to London were registered, equal to an annual rate of 19·3 per 1000, against 18·2, 17·7, and 18·3 in the three preceding years, 1896–7–8; the average rate in the 10 years 1889–1898 being 19·2 per 1000. In the various sanitary areas the lowest death-rates were 11·6 in Hampstead, 12·7 in Stoke Newington, 14·2 in St. George Hanover-square, 14·3 in Plumstead, 15·1 in Lee, and 15·3 in Wandsworth; the highest rates were 24·9 in Holborn and in St. Olave Southwark, 25·1 in St. Saviour Southwark, 25·6 in Limehouse, 27·1 in St. George-in-the-East, 27·7 in St. George Southwark, and 28·4 in St. Luke. Taking the five groups of sanitary areas the rate of mortality during 1899 was 17·8 per 1000 in the north, 18·0 in the west, 18·8 in the south, 22·9 in the east, and 23·0 in central districts. To the principal zymotic diseases 11,147 deaths were referred during the year under notice; 4181 resulted from diarrhœa, 2141 from measles, 1946 from diphtheria, 1717 from whooping-cough, 761 from different forms of "fever" (including two from typhus, 758 from enteric, and one from simple continued fever), 398 from scarlet fever, and three from small-pox. These 11,147 deaths were equal to an annual rate of 2·46 per 1000, against 3·11, 2·57, and 2·77 in the three preceding years 1896–7–8. Among the various sanitary areas the zymotic death-rates ranged from 1·07 in St. Martin-in-the-Fields, 1·09 in St. George Hanover-square, 1·12 in St. James Westminster, 1·16 in Hampstead, 1·33 in Stoke Newington, and 1·35 in Plumstead, to 3·46 in Bermondsey, 3·51 in St. Saviour Southwark, 3·64 in Shoreditch, 3·67 in Newington, 3·78 in Limehouse, and 4·53 in St. George Southwark. The three fatal cases of small-pox registered in London during 1899 were 40 below the corrected average number in the 10 preceding years; one case belonged to Marylebone, one to Whitechapel, and one to Lewisham sanitary areas. The 2141 deaths referred to measles were 700 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in St. George-in-the-East, Limehouse, St. Saviour Southwark, St. George Southwark, St. Olave Southwark, and Bermondsey. The 398 fatal cases of scarlet fever were 557 below the corrected average number; this disease was proportionately most fatal in Fulham, Clerkenwell, St. Luke, St. Olave Southwark, and Rotherhithe sanitary areas. The 1946 deaths referred to diphtheria were 279 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in St. George Southwark, Newington, St. Olave Southwark, Bermondsey, Rotherhithe, and Lewisham (excluding Penge). The 1717 fatal cases of whooping-cough were 718 below the corrected average number; this disease was proportionately most fatal in Chelsea, St. Pancras, Limehouse, Poplar, St. George Southwark, and Newington sanitary areas. The 761 deaths referred to different forms of "fever" were 164 above the corrected average number; among the various sanitary areas the highest "fever" death-rates were recorded in Holborn, Clerkenwell, City of London, Bethnal Green, Limehouse, and Rotherhithe. The 4181 fatal cases of diarrhœa were as many as 930 above the corrected average number; this disease showed the highest proportional fatality in Fulham, St. Luke, Shoreditch, Poplar, St. Saviour Southwark, and St. George Southwark sanitary areas. In conclusion, it may be stated that the mortality in London during 1899 from these zymotic diseases was, in the aggregate, more than 9 per cent. below the average.

Infant mortality in London last year, measured by the proportion of deaths under one year of age to registered births, was equal to 166 per 1000, against 160, 158, and 166 in the three preceding years. The rates of infant mortality in the various sanitary areas ranged from 103 in Stoke Newington, 112 in St. Giles, 124 in St. Marylebone and in Plumstead, and 129 in St. George Hanover-square and in Hampstead, to 203 in St. Martin-in-the-Fields and in St. Saviour Southwark, 204 in Shoreditch, 205 in St. George Southwark, 207 in Westminster, 216 in Limehouse, and 226 in Holborn.

BOTKIN'S *Bolnichnaya Gazeta* is publishing a series of "Letters from India" from Dr. Kashkadamoff. At present the statistics of the plague epidemic and the hygienic methods adopted for combating it are the subjects principally dealt with.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified: — Fleet Surgeons: F. A. Jeans to the *Ramillies* and J. D. Henwood to the *Benbow*. Staff Surgeons: H. B. Beatty and J. H. Thomas to the *Diana*; R. F. Bowie to the *Europa*; and J. H. Stenhouse to the *Edgar*. Surgeons: Henry N. Stephens to the *Egeria*; Samuel H. Woods and Percy T. Sutcliffe to the *Duke of Wellington*, lent to the *Excellent*: A. E. Kelsey and W. W. Keir to the *Royal Arthur*; P. M. May to the *Mildura*; F. Bradshaw to the *Wallaroo*: J. A. Forrest to the *Howe*; W. B. Macleod to Haslar Hospital; R. S. Bernard to the *Torch*; W. L. Martin to Haslar Hospital; J. W. W. Stanton to the *Algerine*; E. G. E. O'Leary to Haslar Hospital; F. J. McKenna to the *Lion*; K. H. Jones to the *Waterwitch*; and A. H. Jeremy to the *Phœnix*.

THE IMPERIAL YEOMANRY.

To be Medical Officers, with the temporary rank of Captain: A. C. Fry,; E. T. Vint, Surgeon-Lieutenant-Colonel W. J. Naismith (Ayrshire Yeomanry), H. Manders (Captain and Honorary Major, 1st Volunteer Battalion Princess Charlotte of Wales's Royal Berkshire Regiment), H. A. Lownds (Captain, 2nd Volunteer Battalion the York and Lancaster Regiment), Robert Craig Dun, Douglas Percival, Charnley Smith, and R. Mervyn Wilson. J. A. Lea to be Medical Officer, Base Depôt, with the temporary rank of Captain.

ROYAL ARMY MEDICAL CORPS.

Lieutenant E. McDonnell and Major C. Birt have arrived at Portsmouth for duty with No. 7 General Hospital. Lieutenant-Colonel W. W. Kenny, Captain G. A. T. Bray, and Lieutenant G. J. S. Archer have left Woolwich. Lieutenant-Colonel J. G. MacNeece has arrived at Portsmouth for charge of No. 7 General Hospital, being mobilised for South Africa. Major J. Moir, medical officer in charge of troops, Esquimalt, British Columbia, is ordered home. Captain H. A. Berryman has arrived at Colchester.

The undermentioned Lieutenants to be Captains:—George E. F. Stammers, Charles F. Wanhill, Wilfrid E. Hudleston, Martin P. Corkery, Frederick J. Gaine, Leonard Addams Williams, Malcolm Mac G. Rattray, John H. Power, Richard E. G. Phillips, Thomas H. M. Clarke, D.S.O., and Edwin W. P. V. Marriott.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant A. Macdonald to be Surgeon-Captain, and Surgeon-Captain Simon Linton, 1st Fifeshire Volunteer Artillery, to be Surgeon-Captain.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant-Colonel C. B. Stoney, 3rd Battalion the Prince of Wales's Leinster Regiment (Royal Canadians), resigns his commission, with permission to retain his rank and to wear the prescribed uniform on his retirement.

VOLUNTEER CORPS.

Artillery: 1st Cumberland: Surgeon-Lieutenant George Martin resigns his commission and is appointed Captain. 2nd Glamorganshire: Surgeon-Lieutenant C. H. D. Morland resigns his commission. *Royal Engineers*: 1st Lancashire: Henry Halton to be Surgeon-Lieutenant. *Rifle*: 3rd Volunteer Battalion the Cheshire Regiment: Second Lieutenant Bernard Hale Woodyatt resigns his commission and is appointed Surgeon-Lieutenant. 2nd Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant A. W. Sheperd to be Surgeon-Captain. 3rd Volunteer Battalion the Essex Regiment: Daniel Mowat to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Duke of Cambridge's Own (Middlesex Regiment): Thomas Christopher Cummins to be Surgeon-Lieutenant.

TRANSVAAL WAR NOTES.

In the House of Commons on Tuesday, Feb. 6th, in reply to Sir W. Foster, Mr. Wyndham said that 368 officers of the Royal Army Medical Corps are employed in South Africa, 377 at other foreign stations, and 111 at home. 133 civil surgeons are employed in South Africa and 28 more are under orders to go. 112 retired pay officers are employed at home.

At a meeting of the Imperial Yeomanry Hospital Committee held at 20, Curzon-street, W., on Feb. 5th, Lady Georgiana Curzon stated with reference to the position of affairs in

regard to the hospital and its equipment that three-quarters of the equipment would be shipped by Feb. 7th, and two-thirds was already at sea. The medical men would leave in the *Majestic* on Feb. 10th with the exception of Lieutenant-Colonel Sloggett, R.A.M.C., military commandant of the hospital and principal medical officer, and Mr. A. Fripp, chief civilian medical officer, who would go in the *Norman* on the same date, accompanied by 114 members of their staff. The Prince of Wales will inspect the hospital staff at Devonshire House to-day (Friday). Mr. Charles Stonham, F.R.C.S. Eng., senior surgeon Westminster Hospital, Surgeon-Captain Middlesex Yeomanry Cavalry, has been appointed senior surgeon.

Dr. Mario Nascimento, a Portuguese doctor, lately Mayor of Lourenzo Marques, has volunteered his services in the British ambulance at Natal and has been accepted.

Princess Christian and Princess Victoria of Schleswig-Holstein visited the sufferers from the war at Netley Hospital on Feb. 6th. Their Royal Highnesses were received at Netley Pier by Colonel Creagh and Colonel Charlton, R.A.M.C. On arrival at the hospital their Royal Highnesses were conducted through the wards, in which were some 300 patients.

Nurse "Lawrence," mentioned in the second paragraph under the above heading last week, should have been Miss Eda C. Laurence, sister of Judge-President P. M. Laurence, of the High Court of Griqualand West, Kimberley, and daughter of the Rev. P. Laurence of Walesby, Lincs.

FIELD HOSPITALS AND AMBULANCE FOR HILL WARFARE.

Lieutenant-Colonel C. J. McCartie, I.M.S., has issued through Messrs. W. Thacker and Co., Creed-lane, E.C., a pamphlet recommending several changes in our field hospital system to make it suitable for mountain warfare. The main points of his plan are to divide the hospital equipment into (*a*) indispensable and (*b*) reserve, and to have the "indispensable" carried by porters accompanying the troops. Each regiment now takes two field panniers on a mule, but Lieutenant-Colonel McCartie believes that instead of this a regiment might take all the indispensable articles of the panniers in two knapsacks of about 35 lb. each on two porters. For a brigade of four regiments and a battery there would be 10 porters attached to corps and 32 porters to carry all the articles that are really necessary for the two field hospitals belonging to the brigade, whereas at present the equipment is carried by about 105 mules with 35 drivers. Porters can keep up with the troops over hills or snow, but mules cannot do this. There are 13 medical officers in the brigade. Each would be accompanied by a porter carrying an amputation case, chloroform, and everything necessary for ordinary operations. With the present system an operation cannot be performed on the march without unloading and re-loading a mule, and if the mules are left behind no instruments or lanterns are obtainable. The other 29 porters would carry medicine, milk, soup, dressings, &c., and about 14 lanterns. The ambulance of a brigade now provides for the carriage of 49 patients in dandies and 160 on riding mules, besides the four stretchers for each regiment. There are 306 bearers for the dandies. Lieutenant-Colonel McCartie describes and figures patterns of dandies and stretchers which he considers to be much superior to the regulation ones.

THE FAMINE IN INDIA.

India has been sorely tried of late years. It will be seen from our Special Correspondent's letter published in the present number of THE LANCET that plague continues its ravages and from the official statement furnished by the Secretary of State for India to the Lord Mayor that the country is suffering from a terrible famine—terrible alike in the great extent of its area of prevalence and the number of the population affected.

JOURNALISM AND THE WAR.

We refer our readers to the latter part of an article, "Musings without Method," in *Blackwood's Magazine* for February for a trenchant criticism on journalism in connexion with the war in South Africa. It strikes us as well worthy of being read at the present time.

The annual distribution of prizes to the London Companies the Volunteer Medical Staff Corps will take place on Feb. 17th, at 8 P.M., at the headquarters of the corps, 51, Calthorpe-street Gray's Inn-road. The prizes will be distributed by Surgeon-General H. S. Muir, Deputy Director-General, Army Medical Service.

Correspondence.

"Audi alteram partem."

NEALE'S DIGEST: A RECOGNITION OF THE AUTHOR'S LABOURS.

To the Editors of THE LANCET.

SIRS,—No doubt most of your readers are aware that Dr. Neale has recently published the supplement to his Medical Digest, which completes and brings down to date that admirable guide to the British medical literature of the last 50 years; but it is not likely they have any idea of the enormous and unremitting labour this self-imposed task has cost the compiler. The work of making his index and preparing it for the press has involved an average of four hours per day for more than 50 years. This labour has not only been without remuneration, for the publication of the Digest has never been profitable, but it has been carried on year after year at great cost to Dr. Neale, who with rare determination has cheerfully persevered in a task which he originally undertook for the benefit of science and of his profession rather than for his own pecuniary advantage.

It seems to the undersigned that it would be unbecoming to the profession he has worked for if Dr. Neale's labours were allowed to pass unrecognised, and they have, therefore, decided to invite the members of the profession throughout the British Empire to contribute to a fund which will enable them to present Dr. Neale with a suitable testimonial, as a recognition by his professional brethren of his long-continued and invaluable labours on their behalf. Obviously, it would be premature to discuss the form of the testimonial until the amount of the contributions can be ascertained, but all the subscribers will be communicated with before a decision is arrived at.

We are, Sirs, yours faithfully,

W. S. CHURCH,
President of the Royal College of Physicians.
WM. TURNER,
President of the General Medical Council.
H. G. HOWSE,
Senior Vice-President of the Royal College of Surgeons.
THOMAS BRYANT,
President of the Royal Medical and Chirurgical Society.
R. DOUGLAS POWELL,
President of the Clinical Society of London.
W. WATSON CHEYNE,
President of the Pathological Society of London.
FREDERICK T. ROBERTS,
President of the Medical Society of London.
ALBAN DORAN,
President of the Obstetrical Society of London.
W. H. BROADBENT,
President of the Medical Graduates' College and Polyclinic.
HENRY POWER,
President of the New Sydenham Society.
JONATHAN HUTCHINSON,
Honorary Secretary of the New Sydenham Society.

P.S.—Subscriptions may be sent to Mr. J. Y. W. MacAlister (Librarian of the Royal Medical and Chirurgical Society), 20, Hanover-square, London, W. It will save him much trouble if cheques are made payable to "Bearer" and crossed "National Provincial Bank—Neale Testimonial Account."

"THE CONFERENCE AT NEWCASTLE AND THE MIDWIFERY QUESTION."

To the Editors of THE LANCET.

SIRS,—I have pleasure is answering the questions and suggestions of Mr. Chas. E. S. Flemming in his letter appearing in THE LANCET of Feb. 3rd (p. 338). Radical changes of any kind in systems or schemes which have enjoyed much support for a number of years usually meet with strenuous opposition from some source or other, and I can only express surprise that more has not been shown against my suggested scheme as sketched in THE LANCET of Jan. 20th (p. 197). I feel bound to attribute this to a very wide sympathy which my suggestions have elicited.

Mr. Flemming devotes nearly the whole of his letter to the

question of responsibility. Now, for the life of me I cannot see why he should be so anxious over this point, especially as I myself can observe other points in my scheme which would seem to call for more insistent questioning—as they might be viewed from the standpoint of critics. I refer your correspondent to the division of responsibility as it obtains between a medical practitioner and either his qualified assistant or his trained medical or surgical nurse. Moreover, it should be in the power of an appointed district obstetric practitioner to dismiss any registered obstetric nurse for malpraxis or certain irregularities at a moment's notice, and such dismissal should be followed by inquiry and loss of certificate if the offence were considered sufficiently serious. But whoever hears of serious malpraxis on the part of either an assistant or a qualified medical or surgical nurse? The circumstances under which chief and subordinate work practically forbid it; and so it would be with the properly qualified registered obstetric nurse. I would draw your correspondent's attention to the fact that I gave no fees as appropriate to a Bill. I never mentioned the word Bill in my scheme or in paragraphs referring to that scheme. The whole question of right adjustment of all fees is one for after-consideration, the main question being, Does it seem feasible that midwives should be replaced by the coöperative working of medical man *plus* obstetric nurse?

To the question, "What is the intended effect of the medical man's visit as suggested in the latter paragraph of Clause 4?" I answer that the visit would be one made in order to confirm or not the obstetric nurse's opinion and the patient's belief that she is in a satisfactory condition—a simple confirmative and disciplinary visit, to satisfy everybody and to remind the nurse that her finished work is subject to the inspection of a medical man. Mr. Flemming is labouring under an apprehension regarding Clause 7. He forgets that the working-classes would not be obliged to retain the joint services of an appointed medical man and obstetric nurse, for they would be at liberty to engage an ordinary practitioner if they chose. Under my suggested scheme I do not expect quite every woman to rush to the combination although I do believe that more would take advantage of it than of a midwife as we now understand her, and thus a badly paid and to many practitioners an undesirable class of work (so they say) would be diminished in amount. Likewise Mr. Flemming's anticipation of "complications between neighbours and the difficulties of enforcing the rule" is one of an alarmist. Consultations would never be held with other local general practitioners, but with outside consultants of standing, as rarely as they would be required, and the appointed obstetric practitioner would go on with the case afterwards. *The appointment of obstetricians would take place annually.* Women of the general public would not be obliged to engage the combination, supposing either a medical man or a nurse were unpopular.

I am, Sirs, yours faithfully,

London, Feb. 3rd, 1900. HAYDN BROWN.

CONTAMINATED COCKLES.

To the Editors of THE LANCET.

SIRS,—You are no doubt aware that we had in the city of Belfast in 1898 what might have been considered an epidemic of typhoid fever, and if now the number of cases reported has fortunately very materially decreased we still have more cases amongst us, compared with the other parts of the United Kingdom, than would be considered normal. Notwithstanding the most diligent inquiries the local authorities and the local medical profession have failed to trace the origin of the epidemic. I suggested from time to time that the sale of cockles, collected on the shores of estuaries contaminated by sewage, was perhaps one of the sources which would account for the prevalence of typhoid fever in Belfast. Cockles are mostly consumed here by the poorer classes and these classes seem to furnish more than their proportion of typhoid fever cases. We have in Belfast about 700 Jews, mostly of Russian origin and poor, who all strictly adhere to the Mosaic code of diet, discarding amongst other food all animals living in the sea not covered by scales. As President of the Hebrew community here I have made inquiries and no case of typhoid fever has been reported amongst the members of the congregation for many years past.

My object in bringing the matter before you is to draw attention to this fact, and if similar experience is recorded elsewhere you will no doubt use your powerful influence in connexion with the other members of the medical press to obtain some legislation to prohibit the collection of cockles and oysters from any estuary that might be contaminated by sewage. I am, Sirs, yours truly,

Belfast, Feb. 5th, 1900. OTTO JAFFE.

THE DURATION OF THE IMMUNITY CONFERRED BY INOCULATION AGAINST TYPHOID FEVER.

To the Editors of THE LANCET.

SIRS,—In a leading article on Anti-typhoid Inoculation in THE LANCET of Jan. 27th you state that "it is necessary that the effects should last for a considerable period. On this point we have as yet little information." This raises the question whether we have any scientific data or guide to fix approximately the effect of this or any other inoculation.

It appears to me that there is one circumstance which might and does help us in coming to some conclusion. Dr. W. B. Ransom in his address on "Immunity to Disease" says, "In small-pox, scarlet fever, measles, syphilis, the protection is considerable and long; in typhoid fever it is fairly well marked; in diphtheria more transient; while in pneumonia, erysipelas, influenza, and cholera it is hardly at all apparent." Of course he means an attack of disease naturally acquired and which confers immunity. This may be in diseases naturally acquired. I think in inoculation the period of incubation of disease does help us in coming to some conclusion on the subject. In those diseases in which the period of incubation is longer the effect of inoculation is also longer. One hears a good deal about plague and cholera inoculations. I think the effect of inoculations in these cases must be very transient in men. We are told to look at the statistics. As we all know, statistics can prove anything. What we as scientific men want is scientific explanation to guide us. It further appears to me that inoculation that takes a long time in producing its effect—viz., malaise, fever, &c.—confers immunity which ought to last for a long time too. This leads us to another conclusion. Inoculation can confer a longer immunity only in those diseases in which progress of the disease and morbid changes in the organs or glands which they particularly affect are slow and gradual. In those diseases in which progress is very rapid inoculation cannot be of any advantage such as plague, cholera, and influenza.

For these reasons I venture to think that "anti-typhoid inoculation" will prove of great service, but there should be two or three inoculations at intervals before a marked and permanent effect is produced. Though it has been demonstrated that immunity is due to a vital action of the cells of the body, alteration, however slight, in structure of glands affected has something to do with it. Of all the diseases in which inoculations have been performed in only two of them is there a marked benefit—vaccination against small-pox and inoculation against rabies. The reason is that entire lymph in one case and emulsion of the entire substance of the medulla oblongata in the other are used, and not dead bacilli toxins or proteins separately. It shows that to have any marked effect there should be something more than "anti-infective" or "antitoxin" substances.

Copeman seems to have found the micro-organism of variola. I think, for practical purposes, it will be an evil day for science and humanity if such a bacillus is isolated and we leave off using vaccine lymph as protection against small-pox. I am, Sirs, yours faithfully,

Portley, Caterham, Feb. 4th, 1900. P. J. DAMANIA, D.P.H.

"DEATHS UNDER CHLOROFORM."

To the Editors of THE LANCET.

SIRS,—If Mr. Whiteford will do me the honour to reconsider what I have endeavoured to set out in the three cited recent numbers of THE LANCET he will find that the apposition of facts has answered his question by demolishing the proposition on which it is based. But there is no difficulty in giving a categorical reply. Speaking of the open or Skinner's mask method of administration, Mr. Whiteford's question is: "If the patient does not absorb a similar dose

of chloroform in each case, why do we get a similar result? I am still waiting a reply to this query."

The answer is that *we do not get a similar result*. As I have stated, there lie upon my table newspaper reports of 83 inquests upon persons killed by anæsthetics during the year 1899 in England alone; and some 80 per cent. of these deaths occurred before operation commenced. This 80 per cent., therefore, died of the administration apart altogether from contingencies in the course of an operation. Reading between the lines these 83 inquests represent probably 200 deaths from anæsthetics. Assuming that for each irretrievable case of poisoning four cases are resuscitated by artificial respiration, we have yearly 1000 cases in England in which operative proceedings are broken in upon and a most distressing anxiety is suddenly thrust upon all the medical men who are present. In a country town such a death may also half ruin the career of a young practitioner and prejudice his professional usefulness for years afterwards. These deaths are a matter of intense professional and public concern, and they are due to a want of exactly that uniformity of results which Mr. Whiteford assumes to occur. Again, Mr. Whiteford's argument if sound would merely shift on to the administrator personally, and on to all the medical men who have stood by without protest, that blame which rests upon our present rule-of-thumb method of administration. Mr. Whiteford's argument would also divert us from the real remedy, which, as I submit, lies in the direction of measured dosage.

Mr. Whiteford has left unanswered two questions which I asked him, and I take this opportunity of thanking him in advance for replies in his next letter. Those questions were: 1. Can he show us any method of measured dosage other than the volumetric administration of air charged with the vapour of the anæsthetic? 2. Can he show us any apparatus by which precise and registrable dosage can be secured other than the improved Krohne inhaler?

The administration of "chloroform from an air-tight inhaler" combines asphyxia with chloroform poisoning. I agree with Mr. Whiteford in condemning it utterly. Asphyxia *plus* chloroform poisoning was, in fact, the vice of the old Junker apparatus. Yet even to-day many writers seem not to know the difference between the old Junker apparatus and the modern Krohne inhaler. The Krohne inhaler has, of course, a respiration orifice many times larger than the area of the glottis and which is always open, so that no element of asphyxia can be imported into the use of the apparatus. It also has the feather-indicator, the action of which displays the currents of the respiration with all their variations to every one in the room. This relieves the administrator of watching the movements of the chest. It also prevents his depending upon chest-movements which, with closure of the glottis, are abortive and misleading—though apparently active. In diphtheria and other conditions involving obstruction of the glottis the movements of the chest, as is well known, become specially strenuous, but they are a measure of the difficulty of respiration—not of its efficiency. These persistent chest-movements, nevertheless, are often a trap to the administrator.

As several thousands of the improved Krohne inhalers are now in use all over the world deaths now and then occur with them. I have myself seen administrators use the Krohne inhaler so as to "blow chloroform at the patient." Of course I advocate the Krohne inhaler *used as I have described*. The injection of chloroform air into the vulcanite face-piece must be made *at the ebb-tide of each expiration* so that the on-coming inspiration may sweep the dose of chloroform air well into the lungs. In that case we do not "blow chloroform at our patient"—we blow it into the recesses of his lungs, and all we have to do is to realise that chloroform is a very powerful poison and that we must think in fractions of a minim for each inspiration and not as if we were slopping chloroform about by the ounce. Administrators there are who complain that they "cannot get their patients under with the Krohne inhaler." If such administrators be observed it will be seen that they have no sense of time as to the proper phase-moment of the respiration cycle at which the chloroform air is injected into the face-piece. Some such men lose or gain time and work all round the respiration cycle like a man who gains or loses a whole bar in a waltz every time he gets round the room. The result is that sometimes they cannot get their patients under, sometimes they get them under too well. If the chloroform air be injected into the face-piece during expiration it is "blown at the patient," but it is at once reflected into the faces of the medical men and nurses by being blown out of the mixing box. If the administrator have a sense of time but no other sense he will stick to the beat of the expiratory phase of the respiration cycle, pump very strenuously, and use bad language to the inhaler. Sometimes he will stop up the respiration orifice and by hook or by crook will stupefy his patient, the stupefaction being a combination of asphyxia and anæsthesia. If he lack a sense of time as well as other sense, when not being able to get his patient under has driven him to desperate pumping, he may suddenly lose half a beat and drop into the inspiration phase of the respiration cycle. He then provokes spasma glottidis and the sequence of phenomena which I have previously described.

It is quite true that "the depth and frequency of the respiration vary in different patients and in the same patient at different times." But Mr. Whiteford's conclusion upon this is a *non sequitur*. In using the Krohne inhaler we have the patient recumbent; the inhaler is then fitted carefully and comfortably to the face, a little pleasant small talk follows until the patient has realised that he can breathe as comfortably and freely with the inhaler on as with it off. Under this manœuvre the patient's respiration generally becomes calm and regular. But *in any and every case* the squeeze of the bellows-ball must be timed to the ebb-tide of the expiration so that the on-coming inspiration sweeps the chloroform air, diluted with the inspiration current, into the recesses of the lungs. So much for timing to the beat of the phase-moment of the respiration cycle. As to amplitude of squeeze—which governs not the time of the injection but the amount of each dose—that can be controlled perfectly with a very little previous practice, and be made to deliver from one to 100 cubic centimetres of air saturated with chloroform vapour. In maintaining anæsthesia a squeeze of small amplitude for every third or fourth inspiration generally suffices. Here one must be guided, as Mr. Whiteford says, rather "by the state of the pulse, respiration, and pupils than by any hard-and-fast line as to the amount of chloroform" used. Assuming that the injections of chloroform air are properly timed for the successive inspirations and that the amplitudes of squeeze are properly regulated, our position is improved immensely over the open method, in which we never really know how much has been propelled into the lungs. But we still have indeterminate factors to cope with, and the effect, or real dosage, depends on the balance between ingestion and egestion—as with other drugs whether ingested by the stomach, by hypodermic injection, or by inhalation through the lungs. In hot weather, for instance, exhalation by the lungs and skin are much more active than in cold weather, and there are other factors which will alter the balance of real dosage. The final adjustment of the dosage is a matter of touch—like pitch in playing the fiddle. But to have an implement which responds perfectly to all the intelligence that an administrator can hope to possess is a vast help and security. That is what the Krohne inhaler is to the man who has initiated himself into its use. Practically its face-piece is a domed cell, standing over the mouth and nose, made air-tight to the face below by means of the rubber inflator, but absolutely open at the top and there furnished with the feather indicator which displays the currents of the respiration. Through this one can breathe all day as well as if it were not on, and there is no element of asphyxia unless some sage stops up the respiration orifice and converts it into an old Junker apparatus. The rest of the apparatus is a mere addendum by which any volume of air can be pumped through chloroform in a graduated bottle and be propelled into the face-piece. The chloroform air, being heavier and a shade colder than the atmosphere, falls on to the mouth and nose at the moment of the pause after the expiration is finished. By the next on-coming inspiration this chloroform air, more or less mixed with the inspiration current, is swept into the recesses of the lungs. The outcome is that, with a little practice, a sufficiently precise and measured dosage—summed up and registered by the graduated bottle—can be secured. This serves as a "dead reckoning," but it does not supersede the astronomical observations with which a prudent captain checks off his dead reckoning as often as opportunities occur.

Again, there is always the time-factor. If an administrator work his bellows with such amplitudes as to inject,

say, 10 minims of chloroform into the 12 or 13 cubic inches of blood that lie between the terminals of the pulmonary and coronary arteries—not giving the time necessary for the distribution of these 10 minims of chloroform into the large mass of blood in the general circulation; in that case the use of a Khrone inhaler will not keep the patient alive. Here the time-factor is the determinant. We kill our patient with an insignificant amount of chloroform, just as with a hammer of insignificant weight we fracture the skull of a porter who carries a hundredweight on his head comfortably by means of the distributing ring which is known as the porter's knot. In these cases of sudden death before operation it is the stroke of the concentred action—the local poisoning of the pulmo-cardiac blood—which kills.

The object to be aimed at in inducing an anæsthesia is so admirably described by Mr. Whiteford that I ask permission to reproduce it prominently. It runs thus:—

"I set out with the object of inducing anæsthesia slowly and quietly in from about 10 to 12 minutes and of maintaining this state with regular pulse and respiration and with contracted pupils."

I could not wish for a more lucid or more concise set of sailing directions. They are just what I had the advantage of being taught as an apprentice now some 50 years ago, and they have served me well ever since. For some 40 years I was in the habit of giving chloroform off a towel, or anything else, simply by the light of those principles and with the rule to *go gently at first*—so as to provoke no cough, no resistance, no spasm of the glottis. I have had large experience of chloroform, and should never think of using anything else. I have never had any sort of anxiety about my chloroform in any single case. But I confess, now I have got used to the improved Krohne inhaler and realise the true significance of these deaths, that I should think it a crime to go back to a towel or a Skinner's mask.

I am, Sirs, yours faithfully,

Manchester-square, W. JAMES EDMUNDS.

THE ANTI-VACCINATION PROPAGANDA.

To the Editors of THE LANCET.

SIRS,—I observe from reports in the provincial press that a member of the Anti-Vaccination League has resumed the delivery of the lectures which he gave last year and which were illustrated by lantern slides of (what is called in the advertisement of the lecture) "a painful character" to general audiences. I shall be glad if any of your readers who may be aware of the proposal to give such lectures in their own immediate neighbourhood will kindly communicate with me as soon as possible, in order that efforts may be made to place the lecturer and his misrepresentations in their proper light before the public.

I am, Sirs, yours faithfully,

FRANCIS T. BOND, M.D. Lond.,

Gloucester, Feb. 6th. Honorary Secretary, Jenner Society.

THE HOSPITALS AND THE SICK AND WOUNDED IN THE SOUTH AFRICAN WAR.

To the Editors of THE LANCET.

SIRS,—I have just been to the Army Medical Department and have learnt from Surgeon-General Jameson himself that this question to the hospitals, "What beds have you available?" has been misunderstood. The department did not wish to oust civilians to make room for soldiers, but merely to inquire *at which hospitals there were wards now empty* which for want of money or other reasons could not be opened and which would therefore be available for soldiers if the Government were to pay the cost of opening them. To this question we at the London Hospital are obliged to answer that we have no beds "available" but with sufficient notice we shall, as will every other hospital, be only too glad to do our best to help. As a fact I do not think any civil hospital will be asked, and I found this opinion on the fact that the Army Medical Department, or rather the Soldiers and Sailors Help Society to whom is relegated this work, are refusing offers of completely equipped hospitals from people in all parts of the country. There are a very large number of beds vacant in the military hospitals and huts are being erected to accommodate any overflow. Tempted as every hospital chairman must be to say, "The whole of my hospital is open to the wounded soldiers" because of the advertisement thereby attained, we all have duties to the sick and injured civilians, especially in East-end hospitals where we have no hospital within a cricket-ball's throw to take the cases which we may have to refuse.

I am, Sirs, yours faithfully,

SYDNEY HOLLAND,

Bryanston-square, W. Chairman, London Hospital.

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

To the Editors of THE LANCET.

SIRS,—Whatever may be said of the value of Royal Commissions as a rule there can be no doubt that the members of the latest Royal Commission on the Metropolitan Water-supply have rendered to all interested in the question this service: they have summarised the position. It is true that the inquiry has been unusually protracted and it is also true that a considerable time has elapsed between the termination of the sittings and the publication of the present report. On this latter fact, however, little surprise can be expressed when the very comprehensive nature of the report is realised by a careful perusal and consideration of its contents. The previous history of inquiries on the subject had to be reviewed, the rapid developments in regard to modern requirements had to be taken carefully into account, and fresh possibilities under a series of abnormally dry seasons had to be faced before Lord Llandaff's Commission could get to work on the special subjects upon which Her Majesty through her Ministers on May 1st, 1897, "deemed it expedient that a Commission should forthwith issue to inquire."

You have in a leading article already indicated the limitations of the work of the Commission. It was appointed to determine as accurately as possible the expediency of purchase in the interests of ratepayers and water consumers on financial grounds, and with regard to the future as well as the present requirements of Water London. Now, Lord Balfour's Commission (1892–1893) reported in effect that the sources available within the watersheds of the Thames and Lee were adequate in quantity and quality for a period of 40 years from the date of the inquiry. Since that date the question of adequacy of supply at all times has been intensified and big schemes of increasing present resources or of tapping new water areas have been widely discussed, and to take Lord Balfour's Commission as an authority that was not to be gainsaid was an error. May not the London County Council take advantage of that error and try to re-open questions that have now been decided against them? The proposition by the London County Council to derive water from Wales was the most remarkable suggestion placed before Lord Llandaff's Commission. The London County Council has rendered excellent service to the metropolis, whatever may be said of its methods and ambitions, by forcibly attracting public attention to the important questions of transferring the water undertakings to a public body and of securing an adequate supply of pure water for all purposes.

I am, Sirs, yours faithfully,

MUNICIPALISATION.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Outbreak of Small-pox and Measles in Bombay simultaneously with Plague.—The Plague in Karachi and Poona—General Decline of the Epidemic in India, but Great Increase in Bombay City.—Inoculation in Bombay.

BOMBAY is not only in the commencement of a fourth epidemic of plague but it is confronted with an outbreak of small-pox. The latter began to show itself about a month ago in the northern part of the city and three weeks back the deaths numbered 36. In the week ending Jan. 2nd the victims rose to 68 and for the week ending Jan. 9th the death-roll totaled 96. These figures show that the disease is spreading, and cases are now occurring in all parts of the city. Up to the present time the only other

zymotic disease which has co-existed with the plague has been relapsing fever, and therefore the coincidence of small-pox and measles with a developing outbreak of plague is of epidemiological interest. The total deaths in the week ending Jan. 9th in Bombay amounted to 1870, which is equal to a death-rate of over 115 per 1000 per annum. The normal mortality is about 546, so that the excess of deaths amounts to 1324. From this latter number must be deducted 96 deaths from small-pox and 74 from measles. There may be an increase of some of the ordinary diseases, but I shall probably not be far wrong in estimating 1000 deaths as due to plague although only 324 have been so recorded. The plague epidemic is increasing steadily week by week to its maximum mortality.

There is a recrudescence imminent once again at Karachi. Rats have been found dead and dying and several cases of plague have been recorded in the market quarter of the city. Poona continues free from plague, but in the districts around a few cases still keep cropping up. A further development is hardly to be expected at present.

For the whole of India the returns are more satisfactory, only 1279 deaths being returned this week as against 1386 for the previous seven days. The Bombay Presidency continues as heretofore chiefly affected, and returns 964 deaths. Madras returns, 44; Bengal, 66; North-West Provinces, five; Punjab, five; Central Provinces, 49; Mysore State, 40; and Hyderabad State, 101. Calcutta reports 64 deaths from plague. The disease is known to be raging elsewhere in the Bengal Presidency, but there are no figures given in the official returns.

It is pleasing to record that inoculation is proceeding very satisfactorily in Bombay as the following table shows:—

	From Sept. 6th, 1899, to Jan. 3rd, 1900.	From 1898 to Jan. 3rd, 1900.
Brahmins	941	2,170
Jains	805	1,068
High-caste Hindus	31,923	36,413
Low-caste Hindus	38,888	50,934
Mohammedans	8,013	17,483
Parsees	1,292	7,839
Jews	582	718
Europeans	182	313
Eurasians	141	181
Native Christians	941	2,179
Others	1,012	1,257
Unclassified	1	651
	84,721	121,206

It is curious to note that the Mohammedans come forward in small numbers compared with their population. The same remark applies to the Eurasians. In view of the developing outbreak in the city it is a very hopeful sign to find that about 7000 people continue to come forward every week to go through the operation. Private enterprise is doing a great deal in this undertaking and the doles of money and grain attract the larger portion. It is not exactly known how long the protective effect of inoculation lasts, so that with a total population of over 821,000 it may roughly be estimated that about one-tenth only of the people have been protected at the present time.

Jan. 18th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Anti-Tobacco League.

THE annual meeting of the British Anti-Tobacco and Anti-Narcotic League was held on Feb. 2nd in the Lord Mayor's Parlour at the Manchester Town Hall, under the chairmanship of Dr. R. Martin. The Lord Mayor, Archdeacon Wilson, Principal Hopkinson (principal of Owens College), and other gentlemen sent letters of apology for their absence. The chairman said that "he had tried to get the medical profession represented at the meeting, but had failed." Yet it is not to be supposed that all medical men smoke. He lamented the fact that though it was 30 years since he presided at the first annual meeting of the league, "instead of progress in the country there had been recession." He said that the habit of smoking was a danger to the young, because in so many cases it led to the habit of drinking. This many deny; but most if not all members of the medical profession would condemn juvenile smoking on its own merits. Dr. Martin would agitate for a law making smoking by boys illegal. Other speakers deplored the small support which the movement obtained, and that the income of a "national" society should not be more than £400 a year. One speaker said that he considered it a sad sight to see our reservists supplied with drink and tobacco. As regards the drink, many even of the men at the front would endorse his opinion, but he would find few of them voting to have their tobacco cut off. Nor does it appear that tobacco has lessened either the courage or the endurance of our soldiers, of which even the anti-tobacconists must be proud.

A Manchester Scholar's Death.

An inquest was held on Feb. 2nd by the city coroner on the body of a boy, aged 10 years, who attended St. Clement's School, Openshaw. It seems that on returning home one afternoon he said that the teacher had hit him on the head with a ruler. He afterwards complained of pains in his head, was confined to his bed, and died in about three weeks. The teacher herself admitted that she had struck the boy on the head some time ago and that "she apologised to Mrs. Roberts," the child's mother. "He appeared to be a timid and delicate boy." Mr. W. J. Heslop, the police surgeon, found on post-mortem examination "that the cause of death was consumption." In the course of his evidence Mr. Heslop said that it was a dangerous thing to strike a child on the head, and Mr. Smelt, the coroner, stated that a schoolmistress who had admitted that she had struck a little boy on the head was unfit to be one any longer. In a letter to a local newspaper Dr. McGowan, the medical man who attended the boy, stated that his death certificate was refused by the registrar, that he was not asked to be present at the inquest, and that in his opinion the blow on the head had nothing to do with the cause of death. Granting all this, it is no justification for the conduct of the teacher. The coroner considered that this case should be inquired into by the managers of the school. Dr. McGowan in his letter hoped that "the Teachers' Union will not allow the matter to drop, as it will give extreme satisfaction to many members of the medical profession to find that they have got allies in the teaching profession." It is not clear what this means. These unhappy cases show that there should be more medical supervision over our elementary schools than there is at present, but Dr. McGowan is too kind and humane to think that teachers should use rulers to the head of their "timid and delicate" pupils at their own will.

Manchester Medical Staff Corps.

A communication from the War Office has been received in Manchester stating "that the employment of the Medical Staff Corps both at South Africa and at home is being sanctioned." On receipt of the order it is requested that the men for South Africa may be mobilised and despatched to Aldershot with the least possible delay, "as their services are urgently required." The strength of the corps is 205. Three officers and 81 non-commissioned officers and men are ready and fit for active service, while up to the present about 20 have volunteered for service at home. It is expected that those who volunteer for active service will be sent at once to Aldershot for training under the regular officers and the Army Medical Department.

Feb. 6th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Sir Thomas Grainger Stewart.

ON Feb. 3rd the death occurred at his residence in Edinburgh of Professor Sir Thomas Grainger Stewart, physician-in-ordinary to the Queen in Scotland and Professor of the Practice of Physic in the University of Edinburgh. He had been in bad health for some time and had done no professional work for many months, but at the end his death occurred somewhat unexpectedly.

The Royal Association for Incurables, Edinburgh.

The committee of management of the Royal Association for Incurables in their report for 1899 state that during the year the hospital has made steady and satisfactory progress.

for giving medical attendance by night. These expenses have The number of applicants for admission far exceeded the number of available beds.

The Proposed Base Hospital for South Africa from Edinburgh.

A movement has been set on foot by the Lord Provost of Edinburgh for the equipment of a base hospital to be sent out to South Africa. A ladies' committee is being formed by Mrs. Chapman and Mrs. Mitchell Thomson to coöperate with the committee of management. Several eminent members of the medical profession in Edinburgh have shown an interest in the undertaking. Sir J. R. Andrew Clark, Bart., a retired surgeon-major in the R.A.M.C., has been suggested by the authorities at the War Office as the representative of the Army Medical Department to accompany the hospital to the front. The hospital is to be officered by surgeons and nurses from Edinburgh.

The forthcoming Public Health Congress in Aberdeen.

At the annual congress of the Royal Institute of Public Health, to be held in Aberdeen in the first week of August of this year, the Earl of Aberdeen will act as president. Lord Provost Fleming, Aberdeen, will be vice-president. The other arrangements are to be made by the Public Health Committee of the Aberdeen Town Council.

Northern Hospitals and Wounded Soldiers.

The directors of the Stephen Cottage Hospital, Dufftown, recently offered to the War Office the use of four beds in that institution for soldiers wounded in the Transvaal war. The War Office authorities have accepted this offer should the pressure on the military hospitals render it necessary. The directors of the Turner Memorial Hospital, Keith, have offered accommodation for two convalescent soldiers, the present large number of other patients not permitting a better offer being made.

Feb. 6th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Public Health of Dublin: A Committee of Inquiry.

THE committee appointed on the suggestion of his Excellency the Lord Lieutenant to inquire into the causes of the high death-rate prevailing in Dublin will consist of Mr. C. P. Cotton, M. Inst. C.E., ex-chief engineering inspector, Local Government Board (Ireland), chairman; Dr. Theodore Thomson, Local Government Board (England); Dr. J. W. Moore, President of the Royal College of Physicians of Ireland; Mr. R. L. Swan, President of the Royal College of Surgeons in Ireland, and two representatives of the Dublin Corporation—viz., Alderman the Right Honourable J. Meade, P.C., and Alderman Dowd.

The Irish Field Hospital.

The medical event of last week was certainly the departure, which took place on the morning of Feb. 3rd, of Lord Iveagh's Irish Hospital Corps from Dublin for South Africa. Notwithstanding the severity of the weather the embarcation at the North Wall was witnessed by a very large crowd of enthusiastic spectators. After the inspection of the corps at the Royal Barracks by Major-General Gossett, C.B., commander of the forces in the Dublin District, which took place with due formality on Feb. 1st, Sir William Thomson, the chief surgeon of the hospital, left Kingstown to join a South African mail steamer at Southampton. He will thus arrive some days before the corps in charge of Mr. G. Stoker can reach the seat of war and will be enabled to make arrangements for their reception.

The Hardwicke Hospital, Dublin.

At a meeting of the Board of Guardians of the North Dublin Union held on Jan. 31st a letter was read from the Chief Secretary replying to a resolution of the guardians in favour of obtaining possession of the Hardwicke Hospital on the ground that the proximity to the kitchens and infirmaries of the workhouse was condemned by the city sanitary authority and proposing that a deputation should wait on him on the subject. The Chief Secretary stated that he understood that the deputation was proposed with the object of inducing him to legislate for the purpose of handing over the property of the Board of Governors of the Hardwicke Hospital to the North Dublin Union. He found, however, that the hospital was in existence at the time the guardians erected the buildings which were now said to suffer through its proximity. In view of all the circumstances he could not adopt the views of the board in the matter without having before him in writing the strongest reasons for doing so. One of the guardians stated that the death-rate in the vicinity of the hospital was higher than in any other part of the city. If that assertion be true the matter might fitly form one of the questions to be investigated by the new committee of inquiry which is announced to meet in about a fortnight.

Apathy of the Sanitary Authorities in Cork.

Owing to the prevalence of influenza and the serious character of some of its complications the death-rate in Cork is at present exceptionally high, having advanced to 51 per 1000 in December and to 58 per 1000 in January. Under these circumstances Mr. D. D. Donovan, the superintending medical officer of health, took the very proper course of recommending that measures should be adopted to inform the public as to the infectious nature of the disease and that precautions were advisable to prevent its extension, among which he mentioned notification and isolation where practicable. When, however, this report came to be considered by the Public Works Committee of the Cork Corporation it was far from receiving the attention which it deserved. According to the account of the proceedings as given in the *Cork Constitution* of Jan. 31st, Mr. Rearden proposed that notice of the infectious nature of the disease, with suggested precautions, be posted on the dead walls around the city. The chairman, on the other hand, said that with all due regard for the opinions of the medical men he did not think the disease so infectious as represented and he considered that notification would have a very bad effect. Mr. Moynihan expressed the opinion that influenza was an undefined disease which to his mind was nothing more than a cold. He did not approve of the publication of notices declaring it infectious and proposed as an amendment to Mr. Rearden's resolution that no action be taken. Dr. T. J. Browne, Local Government Board inspector, supported Mr. Donovan's recommendations, but in the result Mr. Moynihan's amendment was carried by four votes to two.

Forster Green Hospital for Consumption, Belfast.

At the fourth annual meeting of this hospital, held on Jan. 30th, it was reported that during 1899 the number of patients treated was 541, while those in the wards were 137. Of these 11 are tabulated as cured, 86 as much improved, while in 35 there was no improvement. There were five deaths. The experience of the physicians has been sufficient to show that cases of consumption can be perfectly well treated in their own country and they regard as one of the most important functions of the hospital the instruction of the people in the healthy habits of life and in the causes and means of prevention of consumption. There is a deficiency of £32 4*s.* 5*d.* owing to the increased expenditure on the large number of patients. A verandah on the south-west front of the hospital and a shelter placed in the grounds have been made so that the "open-air treatment" is thoroughly carried out at the institution and the enlargement of the hospital will shortly have to be considered owing to the increase of patients.

City Analyst for Belfast.

The Belfast Corporation have decided, on the advice of the Public Health Committee, that the chemist to be appointed in the late Dr. J. F. Hodges's place should be required to make all analyses for the corporation, including those of water, and that his remuneration should be fixed at £200 per annum to cover his attendance at court and at all meetings of the Public Health Committee when required and that he should have in addition an annual allowance of £50 for materials; that the fee for each sample analysed (exclusive of water) for other boards or the public should be fixed at 5*s.*, the fee to include certificate (not for publication); and that the fee for attendance in court when required in connexion with prosecutions other than those in which the corporation are directly interested should be fixed at one guinea. The council will advertise for the appointment and then make it in committee.

Feb. 6th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Medical Attendance during the Night.

IN a review of the report of the Prefecture of Police Monsieur G. Vilain considers the expenses of the organisation

regularly increased from 1876, the year when the organisation was founded, to 1896. From the beginning of 1897, when the service was reorganised, the expenses diminished by 72,000 francs in three years. In this period of time the receipts from patients who were visited at night amounted to 39,974 francs, making a total lessening in expenditure of nearly 112,000 francs. M. Vilain points out that even allowing for a fee of 10 francs for every night call during 1899 this sum represents a profit of at least 10,500 francs to the night medical service. This bonus will be added to the estimates for the year of the Exhibition—viz., 1900—the ordinary estimate being fixed at 145,000 francs. In the report submitted to the Municipal Council the balance sheet for 1899 was remarkable for a diminution in the expenses and an increase in the receipts. This happy result is owing in great part to a circular from the Prefect of Police, distributed at all the police-stations, which is handed to every person making a claim on the night medical service. The friends of the patient are informed that they must pay the fees owing to the collector for the district, gratuitous attendance being reserved solely for the very poor. This circular has certainly had the effect of cutting down expenses, and in one district, which formerly was noted for the calls made upon the night medical service, several persons after having been shown this circular have gone away without levying any further tax upon the service.

Hospital Laboratories.

In the recent debate upon the Budget at the Municipal Council M. Henri Rousselle, chairman of the Laboratories Department, again put forward a motion that the various private hospital laboratories should be suppressed and their place taken by a central laboratory for each hospital. M. Rousselle argued that this system would be much cheaper, as all instruments and apparatus could be used in common which are now dispersed among different laboratories whose separate upkeep is very little less expensive than would be that of a central laboratory. He said that culture stoves, autoclaves, and other apparatus could easily be used in common, and the laboratory would be under the charge of a director and two assistants who should be nominated by the medical staff of the hospital and chosen exclusively from among past house physicians and surgeons. The Municipal Council, which thinks of nothing but expense, accepted this view, but from the scientific point of view it has not been so favourably received by hospital medical officers. The work done in a medical laboratory is not comparable to that done in a commercial laboratory of which the Municipal Council was apparently thinking. The director of a medical laboratory is an actual collaborator personally associated with research, and it would be difficult for him were he to be associated with eight or ten different medical men engaged respectively in their own line of research, for he could not be equally versed in all of them. Also, in many researches the medical man engaged wishes his work kept secret before publication, which would be a difficult matter in a public laboratory. The view of a research laboratory current among the Municipal Council shows an absolute ignorance of the methods of scientific work customary in France. Even from the economic point of view the benefit is illusory. The present laboratories are carried on at but small expense and are quite sufficient for their present work. A central laboratory would need a large and specially-constructed building and the expense of building would be a hundred times greater than the sum to be saved by a common use of apparatus. Also if, as would be the case, every medical man were to be engaged upon a research of his own his place would have to be reserved for him and so private laboratories would be practically reconstituted with the additional expense of new buildings for the public institution.

Influenza.

Influenza is raging in Paris as it is in every capital of Europe, and people are much exercised, for there is scarcely anyone who is not affected primarily or secondarily by the disease. Nevertheless, these fears are much exaggerated, for if the cases are numerous they are fortunately not serious. Dr. Bertillon, the head of the municipal statistical department of the city of Paris, in an interview on the subject declared that influenza, which is endemic in Paris, has this winter become particularly prevalent owing to the very damp state of the atmosphere. Here are the mortality figures from influenza during December and January. In December, 1898, there were three deaths registered from influenza, while in December, 1899, there were 20. In January, 1899, there were 18 deaths, while in January, 1900, the figure rose to 39, and 20 of these occurred in the first week of the month, although the general mortality of Paris was not above the normal. The statistical department does not consider that a real epidemic exists—a view which, perhaps, has origin in the fact that a very severe epidemic was looked for during the winter of 1899–1900, based upon the fact that influenza made its appearance during the winter of 1889 and it was thought that there would be a special exacerbation after ten years' time. Such an opinion holds good for most epidemic diseases. The weather, however, continues unfavourable, the wind being constantly from the south. It must be remembered that the figures given above only represent deaths, but it is certain that the number of persons attacked is very large.

Feb. 6th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Influenza and the Holy Year.

LIKE the Horatian "pallida mors," influenza is knocking at the door of the hovel and at the portal of the palace. Queen Margherita is not spared by the unwelcome visitant any more than the subalpine peasant or the factory hand "in populous city pent." Her Majesty is now, I am happy to say, in full convalescence, though not yet allowed to leave her apartment, and the State concert fixed for to-day at the Quirinal has had to be postponed till that most shadowy of all periods, "a more convenient season." His Holiness the Pope "sta bene," I have just been assured; though certain changes in the "order of the day" at the Vatican are quite important enough for lay journalists to connect them with another "deliquio" or "raffreddore" on the part of Dr. Lapponi's august patient. These 'changes," it may be opportune to state, are thus accounted for: the pilgrimages which were to have started this week from Upper Italy have, by influenza, been so reduced in numbers that the "Commissione dei Pellegrinaggi per l'Anno Santo" has had to admonish their "personally conducting" bishops to defer them till their full complement can be made up. The Vatican, in so doing, is for once in harmony with the Italian Government, which sees in the influx of masses of poor people from disease-stricken communities a present danger for Rome, itself gravely visited by the same scourge. Even greater vigilance is being exercised at the French frontier in guarding against the introduction of infective maladies from that quarter. Not only influenza but smallpox is prevalent at Marseilles and Toulon; indeed, the latter disease has already found its way into Italy from those seaports. In view of the pilgrimages from France, therefore, the Italian Government has despatched to Ventimiglia, the frontier station, a fully equipped "servizio sanitario" to subject the pilgrims in question to a thorough examination, which is to exclude from Italy not only the influenza patient but also every individual not effectively vaccinated or revaccinated.

The Treatment of Influenza.

While all the towns and villages are exposing in their churches the images of their respective saints or tutelary "patroni" and "patrone," and are, through their priests, preferring prayers for the removal or abatement of the influenza scourge, the medical schools are formulating the therapeutics hitherto found most efficacious in reaching the same end. The University of Turin, represented by one of its most authoritative consultants, publishes a series of practical indications for the benefit of the practitioner and of the more intelligent of the laity—indications not more significant in their positive than in their negative bearing on influenza. Practically, I may say, these correspond with the findings of the German Committee, which after the epidemic of 1890–92 obtained the opinions of 6000 medical men within the Fatherland as to their professional experiences in presence of the disease. Never, according to the Piedmontese professor, was there more need of the "medico" in contradistinction to "medicamenti" than in the influenza visitations of the last decennium. Yet, he says, "to-day we have increased a thousand-fold the mania for phenacetine, salicylate of soda, salicylate of quinine, and such like," all this, moreover, because the lay or non-professional world

insists on remedies which medical experience has either abandoned or prescribes only in very special cases. This craving on the part of the public for "medicamenti" is encouraged, he says, by those coöperative societies which vend to their subscribers "boccette di chinina" (phials of quinine), or boxes of phenacetine, or of the above-named salicylates without professional sanction, till, with Dr. Fürbringer (of the German Committee aforesaid), he finds that it is more than doubtful whether many patients are not suffering less from influenza than from the "Galenical poisoning" induced by their self-prescribed "medicines." Such "therapeutics" are greatly due to panic; and, if only to allay that depressing emotion, the patient who thinks he is "in for an attack" cannot see the physician too soon and bring himself under the sway of reason and clinical experience. *Au reste*, his indications are such as commend themselves to British practice, in their attention to "small things," in their consideration of every individual case "on its merits," in their avoidance of drastic agents, in their reliance on rest in bed, above all in their warning against impatience of the sick room or undue "haste to be well." He would often, indeed, approve the line taken by a well-known English consultant who, when assured by his patient, "Doctor, I have tried everything," replied, "No, you have not. Have you tried nothing?" and sent him back to bed accordingly.

Feb. 5th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Bubonic Plague in New Caledonia.

THE bubonic plague has broken out at Nouméa, New Caledonia, a port in regular communication with Sydney and only three and a half days' distant. Immediately information reached Sydney of the occurrence of the outbreak the President of the Board of Health took steps to have all vessels arriving from New Caledonia placed in quarantine for 12 days. Several passengers were landed from the steamer *Pacifique* before the quarantine was declared. Several of them have been traced and placed under medical surveillance, but 10 adults and one child are still at large untraced. The steamer *Maroc* was also quarantined at Newcastle, but released on Dec. 29th. In August last the Government cabled to Dr. Haffkine for a litre and a half of his plague vaccine, but none has yet arrived, and Dr. Ashburton Thompson, the President of the Board of Health for New South Wales, has recommended that the vaccine should be prepared locally in the laboratories of the Health Department. The late Government opposed the idea of giving the plague bacillus a home in any part of Australia, even under strict supervision, but probably the subject will now be reconsidered. In Queensland the Government has ordered a quarantine of 14 days for all vessels from New Caledonia. At Melbourne the *Australia* arrived with trans-shipped passengers from the *Pacifique*, and one passenger from Nouméa to Melbourne was placed in quarantine and no other passengers were allowed to land. Dr. D. A. Gresswell, President of the Board of Health of Victoria, has recommended that a supply of Haffkine's vaccine be obtained from India. At a special meeting of the Board of Public Health held on Dec. 30th, the following resolutions were agreed to:

(a) That the whole of Polynesia, Madagascar, Seychelles Islands, and Reunion should be proclaimed as plague-infected.
(b) That the period of quarantining vessels from infected ports be 14 days, and that uniformity be urged upon New South Wales and the other colonies in this connexion.
(c) That the shipping companies affected be informed of the quarantine restrictions.
(d) That the medical profession be asked to immediately notify the Board and the councils of the householders concerned of any cases they discover, independent of the obligations imposed upon them by the Public Health Act.
(e) That the Minister be asked to secure an immediate supply of the plague vaccine, as essential to the health of the community.
(f) That the councils of the colony be informed by circular as to steps to be taken anticipatory of an outbreak.
(g) That all vessels arriving from infected ports, whether they have been over the 12 days on the voyage without an outbreak on board or not, be inspected by medical officers for a week after arrival—i.e., the second, fourth, and sixth days of their stay at a Victorian port.
(h) That no vessels from any Polynesian port be allowed alongside.

Annual Meeting of the Victorian Branch of the British Medical Association.

The annual meeting of the Victorian Branch of the British Medical Association was held on Dec. 21st. The report of the council showed that the average attendance at the meetings during the year had been less than usual. The council had been forced to deal with several ethical cases, and in one had to expel a member for unprofessional conduct, the council's action being ratified by the branch. The following were elected as office-bearers for the ensuing year: President, Mr. G. A. Syme; vice-president, Mr. F. M. Harricks; treasurer, Mr. J. R. M. Thomson; secretary, Dr. D. M. Officer; librarian, Mr. A. W. F. Noyes; Victorian editor of the *Australasian Medical Gazette*, Dr. J. W. Springthorpe; members of the council: Dr. A. V. M. Anderson, Mr. F. D. Bird, Mr. A. L. Kenny, Mr. H. Lawrence, Dr. R. L. McAdam, Mr. F. Meijer, Mr. M. U. O'Sullivan, and Dr. R. R. Stawell. In his address the retiring president, Mr. A. L. Kenny, dealt almost exclusively with the internal affairs of the branch and its relations to the parent association, a subject on which he could speak with authority and knowledge, having acted for years as secretary of the branch and also subsequently as treasurer, and having represented the branch in England when visiting there. Mr. Kenny was of opinion that more interest should be taken in the affairs of the colonial branches by the council of the association and especially greater care and promptness exercised in the association's secretarial and financial dealings with the branch. The by-law of the association dealing with the election of colonial representatives on the council should be altered to permit a branch availing itself of the services of any suitable member who might be sojourning in London. At present a member of the council "must have resided within the area of the branch for at least 12 months prior to his election." Mr. Kenny next advocated the amalgamation of all the Australasian branches in one association as making for increased strength and influence in all Australasian public and professional matters in dealing with colonial Governments and in ethical questions. The amalgamation could also supply an effective and permanent managing body for the Australasian Medical Congresses. The fifth session of the congress at Brisbane was referred to in complimentary terms and some suggestions made for improvements in the routine of congress work, chiefly in the direction of giving more time to sectional work and less to entertainments. Mr. Kenny affirmed the propriety of the resolution passed by the congress with reference to hospital abuse. He recommended that hospital managers and medical officers should be legally empowered to recover fees from patients found guilty of imposition.

The New South Wales Nurses Association.

A special meeting of the New South Wales Trained Nurses Association was held on Dec. 1st to amend the constitution and rules of the association. The secretaries reported that the association numbered 227 members. It was resolved that the name of the association be altered to "The Australasian Trained Nurses Association" and the following was accepted as the basis for registration and membership:—

Candidates for registration must produce proof—(a) That they have been engaged for three years in general hospitals recognised by the council and containing not less than 40 beds; or (b) that they have been engaged for four years in a country, district, or suburban hospital recognised by the council and containing not less than 20 beds, and have been trained at that hospital under a matron or nurse who holds a certificate from a training school for nurses recognised by the council of this association; or (c) that they have been engaged for five years in a private, country, district, or suburban hospital recognised by the council, and containing not less than 10 beds, and have been trained at that hospital under a matron or nurse who holds a certificate from a training school for nurses recognised by the council of this association. Furthermore, all candidates must give references as to their moral character, produce certificates of competency from the hospitals in which they had been engaged, and account for any interval of time in their nursing career when not engaged in hospitals or nursing associations.

Fever Hospital for Sydney.

Dr. Ashburton Thompson, in his capacity as chief medical officer to the Government of New South Wales, has presented to Parliament a report on the need for a metropolitan fever hospital in Sydney. In his opinion such an institution is urgently required and is a necessary corollary to the notification clauses of the Public Health Act. It should not be removed to any great distance from the city. If a few acres of the Sydney Common on Dowling street could be obtained they would provide a suitable site.

Surgeons for South Africa.

Dr. A. MacCormick and Dr. R. Scot Skirving of Sydney have volunteered and been accepted for service in South Africa.

Primary Sarcoma of the Liver in a Child 14 Weeks Old.

In the *Intercolonial Medical Journal* for December Mr. H. M. Hewlett records a case of primary sarcoma of the

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liver in a child 14 weeks old. The child's symptoms were diarrhœa and vomiting and in the abdomen was a swelling, extending from the costal margin to below the umbilicus, smooth and very tender. No jaundice was present. The swelling had appeared rapidly and rapidly increased. The necropsy showed that the swelling was an enlarged liver, studded with nodules which on microscopic examination consisted of large round cells and a few spindle and small round cells embedded in a delicate fibrillar matrix. The lungs were also studded with similar nodules. No other organs were affected. As far as Mr. Hewlett can ascertain the youngest case hitherto recorded was at 12 months.

Dec. 28th, 1899.

Medical News.

UNIVERSITY OF CAMBRIDGE.—The following were admitted to degrees on Feb. 1st:—

Bachelor of Medicine.—F. Shufflebotham, Trinity; R. Ainsworth Pembroke; G. S. Keeling, Caius; R. N. Salaman, Trinity Hall; and F. C. Eve, Emmanuel.

Bachelor of Surgery.—F. Shufflebotham, Trinity; O. Inchley and J. F. Skrimshire, St. John's; G. Browse and R. S. Trevor, Clare; and F. C. Eve and S. V. Pearson, Emmanuel.

FOREIGN UNIVERSITY INTELLIGENCE.—*Florence:* Dr. Angelo Mugnai has been recognised as *privat-docent* of Surgery.—*Halle:* The chair of Internal Medicine has been offered to Professor Kast of Breslau, but he has declined to migrate.—*Munich:* Dr. Otto Walkhoff of Brunswick has been appointed to the chair of Operative Odontology.—*Padua:* Dr. E. Truzzi of Messina has been appointed Professor of Clinical Midwifery in succession to the late Dr. Giovanni Inverardi.—*Pavia:* Dr. Casimiro Mondino of Palermo has been appointed Professor of Clinical Psychiatry.—*Rome:* Dr. Gaetano Mazzoni has been recognised as *privat-docent* of Surgery.

VACCINATION GRANT.—Mr. W. G. Evans, public vaccinator to the Second District of the Frome Union, has been awarded the Government grant for successful vaccination for the seventh time.

PROPOSED MUNICIPAL HOSPITAL FOR BARRY.—On Jan. 31st Dr. F. St. George Mivart of the Local Government Board conducted a public inquiry at Barry Dock into the application made by the Barry District Council for power to borrow £1800 for a site for the purpose of erecting a municipal general hospital for the town.

A PHILANTHROPIC MEDICAL MAN.—Dr. John Beddoe and his wife have provided six cottages as convalescent homes at Bradford-on-Avon where women and girls will be admitted for a nominal weekly contribution. The cottages have been comfortably furnished and fitted with modern sanitary appliances.

BRISTOL MEDICAL ATHLETIC CLUB.—The Bristol Medical Athletic Club held its annual meeting with the Birmingham Medicals at Bristol on Feb. 1st. The usual football match was played in the afternoon and resulted in a win for the home team. In the evening the visitors were entertained at dinner, Mr. J. Paul Bush being in the chair. A visit to the pantomime and a smoking-concert brought the day's proceedings to a successful close.

A MUNIFICENT BEQUEST.—The late Mr. S. Rudolph Zunz of Edgehill, Wimbledon, who died last December, has bequeathed £25,000 to one of the metropolitan hospitals, to be selected by his executors, in order to found and endow, as a memorial of his late wife, an "Annie Zunz Ward," in which is to be placed and kept in preservation a life-size photograph of her. The estimated value of Mr. Zunz's estate is £125,395, and after providing several annuities and assigning the aforesaid sum of £25,000 he directs that the surplus of the estate, the annuities as they fall in, and the entire residue, are to be appropriated to the founding and endowing of "Annie Zunz Wards," in such London hospitals as his executors may select, other than the hospital to which the above £25,000 has been allocated. For the "Annie Zunz Wards" it is considered that between £80,000 and £90,000 will eventually be available.

HOSPITAL SUNDAY IN BRISTOL.—Jan. 28th was observed as Hospital Sunday in Bristol and collections were made on behalf of the Fund in over 200 places of worship. In 1899 the sum of £1508 was contributed to the Hospital Sunday Fund.

PRESENTATIONS TO MEDICAL MEN.—Mr. E. F. Eliot, F.R.C.S. Edin., J.P., was presented on Jan. 25th with a plate-glass surgical instrument cabinet by Classes A and B of the London and South-Western, Southampton Dock, Branch of the St. John Ambulance Association as a mark of appreciation for his services as honorary lecturer of the classes.—Mr. Lennox Browne, F.R.C.S. Edin., has retired from the active staff of the Central London Throat and Ear Hospital but will continue to be identified with the institution as consulting surgeon. His colleagues on the committee and medical staff have presented him with an illuminated address recording their appreciation of his services to the institution since its foundation in 1874. Accompanying the address was a gift of old English furniture.

THE MANCHESTER MEDICAL GUILD.—The sixth annual meeting of the Manchester Medical Guild was held on Jan. 23rd, the President, Alderman F. H. Walmsley, J.P., M.R.C.S. Eng., being in the chair. There were 50 members present. The annual report of the council, which was received and adopted, stated that the council had held 14 meetings during the year and had dealt with many matters of professional interest, including club practice reform, hospital reform, advertising and "underselling," preliminary education, medical aid societies, direct representation on the General Medical Council, alleged secret commissions, the suggested Board of Conciliation, medical organisation, the International Congress of Medical Ethics at the forthcoming Paris Exhibition, district nursing, the collection of blood and other specimens for bacteriological examination for health authorities, points of etiquette, &c. Three members had died during the year, four had resigned, and 29 new members had joined—the number of members at date being 222. Special emphasis was laid upon the need of more localised organisation in order to carry out to the full the objects of the guild—every parliamentary division in the area covered should have at least one convener and every practitioner should be a member of the Guild.—The districts of Eccles and Harpurhey were held up as examples to be followed in this respect. The statement of accounts showed a balance in the bank of over £37. The election by the council of the president (Mr. Walmsley) and of the following honorary vice-presidents was approved:—Dr. Henry Ashby, Dr. C. H. Braddon, Dr. Samuel Buckley, Mr. Wm. Crosby, Dr. J. Dreschfeld, Dr. A. M. Edge, Dr. C. E. Glascott, Dr. Alfred Godson, Dr. James Hardie, Mr. Francis Hepworth, Mr. Thomas Jones, Dr. David Little, Dr. J. Dixon Mann, Dr. D. Lloyd Roberts, Dr. Henry Simpson, Mr. F. A. Southam, Dr. Graham Steell, Mr. Walter Whitehead, Dr. Sam Woodcock, Mr. G. A. Wright, and Mr. A. H. Young. The following officers and council were elected:—Chairman: Mr. Geo. Arthur Wright. Vice-chairman: Mr. R. H. Welstenholme. Honorary treasurer: Dr. C. G. L. Skinner. Honorary secretary: Dr. Arnold W. W. Lea. Ordinary members of council: Mr. Samuel Bagley, Dr. Isaac Blore, Mr. William G. Booth, Mr. G. H. Broadbent, Dr Alfred Brown, Dr. Samuel Crawshaw, Dr. Alexander Fraser, Dr. John H. Godson, Dr. William Graham, Dr. J. Wilson Hamill, Dr. John C. Nichol, Mr. David Owen, Mr. Alic Phillips, Dr. J. Ratcliff-Gaylard, Dr. A. Brown Ritchie, Mr. F. Leyland Roe, Mr. Arthur W. Senior, Dr. Alexander Stewart, Mr. J. W. A. Wood, and Dr. F. H. Worswick. Auditors: Dr. J. Stavely Dick and Mr. J. W. Moore.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Midwives Question.

THE Bill promoted by private members "to secure the better training of midwives and to regulate their practice" was introduced into the House of Commons on Friday, Feb. 2nd, by Mr. TATTON EGERTON. The names on the back of the Bill on this occasion are those of the introducer, Sir WILLIAM HART DYKE, Mr. SCHWANN, Mr. HAZELL, Mr. HEYWOOD JOHNSTONE, Mr. BONSOR, Mr. FLOWER, and Mr. TENNANT. In the ballot for places Mr. TATTON EGERTON drew the eighth number

which enabled him to put down the second reading of the measure in the second place on Wednesday, Feb. 28th. As the measure in the first place on this day is the Mines (Eight Hours) Bill—a measure certain to give rise to a long debate—it is improbable that the Midwives Bill will be reached in time for discussion.

Bills Introduced.

On Monday, Feb. 5th, in the House of Lords, the Lord Chancellor introduced the Lunacy Bill promised in the Queen's Speech, and the Earl of Lichfield a Bill to amend the Isolation Hospitals Act of 1893. No date has been fixed for the second reading of either Bill.

Vaccination Petition.

When Members of either House present petitions it is not to be taken that they necessarily agree with the views expressed in them. The Lord Chancellor was careful to explain this when on Tuesday, Feb. 6th, he presented a petition from the guardians of Wandsworth and Clapham Union in favour of an amendment of the vaccination law so as to prevent vaccination officers from prosecuting defaulters without first obtaining the sanction of the guardians. His lordship carried his explanation so far as to say that he entirely disagreed with the prayer of the petition.

HOUSE OF COMMONS.

THURSDAY, FEB. 1ST.

Inoculation with Anti-Typhoid Serum.

Mr. ALFRED PEASE asked the Under Secretary of State for War if the War Office had sanctioned the experiment of inoculating with anti-typhoid serum troops now on their way to the front; and if, in view of the uncertainty that exists as to the efficacy of inoculation as a preventive of enteric fever, and the debilitating effects of the operation, the Department would forbid the continuance of these experiments; and whether his attention had been drawn to the description in the *Morning Post* of Jan. 29th of the condition and appearance of the soldiers who had submitted to the inoculation on board the *Dunottar Castle*.—Mr. WYNDHAM: The efficiency of the treatment appears to be sufficiently well established to justify the continuance of this operation, which is voluntarily submitted to by the troops.

FRIDAY, FEB. 2ND.

Street Noises.

On the motion of Mr. JACOBY, a Bill was introduced at this sitting to control and regulate street noises.

Meat for the Troops.

General LAURIE and Mr. JEFFREYS addressed questions to the Secretary to the Admiralty with reference to the quality of the fresh meat supplied for the use of the Royal Artillery and other troops taking passage on the steamship *Americas* which sailed from Southampton for South Africa in the month of January—Mr. MACARTNEY replied: Arrangements were made with the owners of the *American*, the West Indian and Pacific Steamship Company (Limited), to victual the troops at the rate of 1s. per head per day. A portion of the troops embarked at Southampton and it has been reported that the fresh meat in question, on being put on board at Southampton, was at once rejected by the embarking officers at the usual inspection of provisions on the ground that it consisted entirely of "bull" and old "cow" beef. The day being Sunday a fresh supply could not be obtained at that port, but in accordance with telegraphic instructions it was replaced at Queenstown (where the remainder of the troops embarked) by meat of good quality ordered by the owners' agent at their expense. The owners state that the meat was purchased from a firm who, they are informed, have supplied a large number of transports and two important trans-oceanic passenger lines. The full market price was paid for it, a guarantee having been given that it would give satisfaction. The contractors state that some of it had been served in the saloon and also to the troops before it was condemned without a word of complaint and that after the meat was returned it was inspected by the town doctor, who certified that it was perfectly sound, it being afterwards disposed of to his family and hotel customers. The directors of the steamship company gave instructions that the victualling of all transports was to be done with unstinted liberality and regardless of cost.

MONDAY, FEB. 5TH.

Sanitation of Gibraltar.

Mr. CHAMBERLAIN, replying to a question addressed to him by Mr. STEVENSON, said that the health of Gibraltar was good. The death-rate for 1898 was only 17·79 per 1000. The remodelling of the whole drainage of the fortress was concluded early last year, and he had no reason to believe that anything further was required. The Sanitary Commissioners had already sufficient powers for dealing with insanitary houses and were exercising them satisfactorily. There was no space available on the limited part of the Rock not reserved for military purposes for the provision of further recreation grounds nor so far as he was aware had any recommendation been made to that effect.

Medical Certificates in the Post Office Service.

Mr. STEADMAN asked the Secretary to the Treasury, as representing the Postmaster-General, whether he was aware that a female telegraphist of the Western District office, London, visited Dr. Mason, the official medical officer, on Dec. 18th, 1899, who, whilst admitting she was suffering from a severe cold, stated that she could perform her duties; that on the same day Mr. Oswald of Brixton, who had been in attendance on the telegraphist for some time, certified she had bronchial catarrh and debility and ordered her to remain indoors; and that although Mr. Oswald afterwards extended the certificate till Dec. 28th the telegraphist had been reported and punished with the loss of two days' pay for remaining from office during this period; whether it could be stated why the Post Office medical official declined to accept the certificate of a well-known practitioner; and, whether the Postmaster-General would personally investigate the circumstances which had led to the telegraphist being condemned for malingering though only acting in obedience to medical instructions.—Mr. HANBURY: In the opinion of the medical officer of the Western district, who saw the telegraphist in question on the 18th and 23rd of December, her state of health on those days was not such as to require her to remain at home; but as Mr. Oswald, who saw her on the 28th, was of a contrary opinion, the Postmaster-General had thought it right to give her the benefit of the doubt and her pay for the two days in question has been allowed.

The Case of the Transport "Jelunga."

In reply to a question on this subject by Mr. Swift MacNeill Mr WYNDHAM said: About 500 wives and children of soldiers were landed from the transport *Jelunga*. They were not in a destitute condition, but they were in a very neglected condition, owing to the want of a sufficient staff on board to look after them. It would no doubt have been difficult for the general officer commanding at Cape Town to provide a sufficient staff, but the Secretary of State for War is of opinion that proper care was not taken, and a reprimand has been accordingly sent to Cape Town. No nurse was on board. Six children died in the course of the voyage; they did not die of cold and exposure, since they died in the tropics. The women were periodically asked throughout the voyage whether they had any complaints to make, and they made none on the subject of their accommodation. The staff officer at Southampton and the officer of the Soldiers' and Sailors' Families Association made every effort to help the women on their arrival; all were asked if they wanted money and all said that they had it. Ten women and 35 children had to spend the night at Waterloo. I have answered this question at length because the Secretary of State regards the incident as most regrettable and is anxious that it should be fully explained to the House. As I have said, care has been taken to impress upon those concerned the necessity of avoiding such mistakes in future.

TUESDAY, FEB. 6TH.

The Strength of the Army Medical Service.

Sir WALTER FOSTER asked the Under Secretary of State for War how many officers of the Royal Army Medical Corps are now employed in South Africa and how many civil medical officers have been sent out to aid them; how many officers of the Royal Army Medical Corps are employed at other foreign stations and how many are at home stations; and whether it is intended to employ any of the retired pay officers for duties in the United Kingdom.—Mr. GEORGE WYNDHAM: 368 officers of the Royal Army Medical Corps are employed in South Africa, 377 at other foreign stations, and 111 at home. 133 civil surgeons are employed in South Africa and 28 more are under orders to go. 112 retired pay officers are employed at home.

PRESERVATIVES AND COLOURING MATTERS IN FOOD.

EVIDENCE BEFORE THE DEPARTMENTAL COMMITTEE.

MONDAY, FEB. 5TH.

THE Committee appointed by the President of the Local Government Board to inquire into the question of preservatives and colouring matters in food held another meeting to-day, at the rooms of the Chemical Society, Burlington House, and proceeded with the collection of evidence. The Committee consists of Sir Herbert Maxwell, M.P., chairman; Professor Thorpe, Dr. Bulstrode, and Dr. Tunnicliffe, with Mr. C. J. Huddart, Secretary.

Dr. BLAXALL, lecturer on bacteriology in the Westminster Hospital Medical School and bacteriologist to the Vaccine Department of the Local Government Board, examined by the chairman, said that he had undertaken experiments dealing with the bacteriological action of preservatives in milk. His first idea was to see whether small quantities of formalin could be used to sterilise milk and whether the formalin could be driven off leaving the milk sterile, but this he found to be impossible. He found that it required 1 in 500 of formalin to effect sterilisation in milk. This strength killed all germs in the milk and made it keep indefinitely. He had milk with 1 in 500 of formalin which had kept for seven months. The milk with which he experimented was bought from local dealers in London and was received not in sterilised vessels but in ordinary domestically cleaned vessels from which it was measured out in known quantities. He tested all the samples for formalin, but he only tested the first two for boric acid or salicylic acid. The bacteriological test which he applied to the control milk showed that it was in a normal condition. The samples were kept hermetically sealed. With one exception all the controls went bad in 24 hours, the exception occurring on a very cold night. The experiments he had made with boric acid proved that this was a much less powerful germicide or even antiseptic than formalin. Boric acid would not sterilise milk in any of the proportions he used, and he used as much as 1 in 33; the milk would only take up 1 in 25. The proportion of 1 in 33 prevented fermentation, but did not prevent germs being in the milk.

By Professor THORPE: His experiments were all made with commercial milk in the condition in which it would be supplied to the consumer, and the bacteriological examination of the control samples showed, with certain exceptions, that the samples were taken comparatively near milking time. Salicylic acid he found to be as little efficacious as boric acid. His experiments were made from the point of view of a scientific man—to study the course of the action of preservatives upon the milk—and he did not attempt to imitate the conditions in which these preservatives might be used in the practice of trade. He had general but not expert knowledge of the conditions in which they were used commercially and he could not say whether such an amount as 1 in 500 of formalin was ever used. His experiments had shown that 1 in 10,000 of formalin would keep milk sweet for a short time—for possibly 24 hours—at 60° F. He had not found it keep for 24 hours at 80° F. He quite agreed that want of precise information as to the age of the milk caused a considerable amount of uncertainty as to the direct applicability of his results.

Professor THORPE: Would you say from your experiments that 1 in 50,000 of formalin would be of any use in keeping fresh milk sweet for 24 hours on a hot day?

Dr. BLAXALL: It entirely depends upon what comes in contact with fresh milk. If fresh milk is sterilised then it does not matter whether you put in formalin or not.

Professor THORPE: But suppose ordinary commercial conditions, do you think 1 in 50,000 of formalin would be of any practical use in keeping fresh milk sweet for 24 hours in hot weather?

Dr. BLAXALL: I do not think it would be of any use.

In answer to further questions by Professor THORPE, Dr. BLAXALL

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said that in his experiments quantities like 1 in 2000 of boric acid and 1 in 50,000 of formalin had no material effect in keeping milk sweet, though of course they had a certain effect.

By Dr. TUNNICLIFFE: From a bacteriological standpoint a commercial milk containing from 200 to 500 organisms per loopful would be a fair normal milk. It was difficult to say what number of organisms would render the milk unsaleable, because everything depended on the kind of organisms present. In the summer he bought two samples of milk and they contained 20,000 and 40,000 organisms per loopful and there was no evidence that the milk was sour or unfit for sale. The probability was that the greater the number of organisms the nearer the milk was to sourness and therefore to decomposition. In some of these milks to which preservatives had been added, say boric acid, there was still an innumerable amount of organisms and yet the milk had not gone bad; fermentative action had been stopped but other organisms had been allowed to grow. He was not prepared to give an opinion upon the antiseptic action of these preservatives from the point of view of their toxic equivalents.

By Dr. BULSTRODE: The formalin he used in his experiments was a 40 per cent. solution. He commenced to work in May and went on through May and June, then in a desultory fashion in August, and then he commenced again in September, and all through the autumn and winter he had been working at the subject systematically. It was quite obvious that besides lactic acid changes there were other changes which might be going on in the milk. They were nearly all distinguishable by smell; he did not think that the milk would be sweet if processes which were deleterious were going on. He thought that pathogenic organisms, such as the typhoid bacillus, might be expected to be inhibited by less quantities of the preservatives than would be required for the complete sterilisation of the milk, for the typhoid bacillus was much less resistant than the lactic acid bacillus.

Mr. HENRY CHARLES CAMERON, Produce Commissioner for the Government of New Zealand, the only other witness examined at this sitting of the Committee, gave evidence principally with regard to the New Zealand butter trade. He explained that the Government of the colony seek to improve the industry by means of instruction and inspection and that their efforts in these directions are eminently successful. The bulk of the New Zealand butter sent to this country was, he said, either treated with salt or with a preservative whose basis was boric acid. It was found necessary to use this preservative because, according to Mr. Cameron, butter which had been brought to this country in refrigerating chambers deteriorated more rapidly when taken out of these chambers than butter which had not been frozen. But the quantity of preservative required was small, not more than one half per cent. Mr. Cameron thought that there should be a statutory limit and he suggested half per cent. as suitable in the case of butter.

The Committee then adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ADAMS, JOSEPH DIXON, M.D. St. And., M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health by the Yeovil Rural District Council.

AMBROSE, A. P., M.R.C.S., L.R.C.P., has been appointed Clinical Assistant to the Chelsea Hospital for Women, Fulham-road, London, S.W.

ANDERSON, F. T., M.D. Brux., F.R.C.S. Edin., has been appointed Honorary Medical Officer to the Barnstaple and North Devon Dispensary, vice J. L. W. Ware, resigned.

BIGGS, J. E., B.A., M.D., D.P.H. Cantab., has been appointed Medical Superintendent to the Grove Fever Hospital Tooting, S.W.

BIRKETT, G. T., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Catford Sanitary District of the Lewisham Union.

GREENWOOD, T. PARKER, M.B., C.M., B.Sc. Edin., has been appointed Assistant Medical Officer to the Three Counties Asylum, Hitchin.

GRIFFITHS, JOHN, L.R.C.P. Lond., M.R.C.S., has been appointed District Chief Superintendent of the No. 2 District (Southern and Western Counties of England and Wales) of the St. John Ambulance Brigade.

JONES, W. WATKINS, M.D., C.M. Edin., D.P.H. Camb., has been appointed Medical Officer of Health to the Gelligaer and Rhigos District Council.

MANDER, PERCY ROBERT, L.R.C.P. Lond., M.R.C.S., L.S.A., Deputy Medical Officer of Dartmoor Prison, has been transferred to Wandsworth Prison, and will be succeeded at Dartmoor by Mr. Forward.

METCALFE, G. B. GIBSON, L.R.C.P., L.R.C.S. Edin., L.F.P. G'asg. & L.M., has been re-appointed Medical Officer for the Capel District of the Tonbridge Union.

MORGAN, FREDERICK CHARLES, L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer at the Eastville Workhouse by the Bristol Board of Guardians.

NOBLE, H. PERCY, M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed Assistant Anæsthetist to the Middlesex Hospital.

PASTEUR, WM., M.D. Lond., F.R.C.P., M.R.C.S., has been appointed Physician to the Middlesex Hospital.

PORTER, CHAS., M.D. Irel., M.R.C.S., D.P.H. Cantab., has been appointed Medical Officer for the County of Salop.

POTTS, W. J., M.D. Lond., L.R.C.P., M.R.C.S., D.P.H. Camb., has been appointed Medical Superintendent of the Infirmary, parish of St. Matthew, Bethnal Green, London.

RENSHAW, C. A. K., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Aston-on-Mersey Sanitary District of the Bucklow Union, vice J. Paulin, resigned.

RICHARDSON, R. J., M.B., C.M. Edin., has been appointed Visiting Physician for the Netherfield-road Hospital, Liverpool.

RISDON, GEORGE OWEN, L.R.C.P. Lond., M.R.C.S., L.S.A., has been re-appointed Medical Officer for the No. 2 District of the Wells (Somerset) Union.

ROBINSON, ARTHUR HENRY, M.D. Durh., M.R.C.S., D.P.H. Camb., has been appointed Medical Superintendent of the Islington Infirmary, Highgate-hill, N.

ROSSER, J. S., M.D. Glasg., D.P.H. Glasg., has been appointed Medical Officer for the Llandovery District of servants employed on the London and North-Western Railway, and also Medical Officer to the railway employés of the Llandovery and district Railway Medical Fund, vice F. W. Lewis.

ROWBOTHAM, A. J., M.R.C.S., has been re-appointed Medical Officer for the Newton-on-Trent Sanitary District of the Gainsborough Union.

ROW, C. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Battle Union, vice J. C. Garman, resigned.

SHARPLEY, J. E., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer for the Blyborough Sanitary District of the Gainsborough Union.

VINCENT, R. H., M.B., B.S., has been appointed Clinical Assistant to the Chelsea Hospital for Women, Fulham-road, London, S.W.

Vacancies.

For further Information regarding each vacancy reference should be made to the advertisement (see Index).

ALDERSHOT URBAN DISTRICT COUNCIL.—Medical Officer of Health. Annual election. The inclusive salary will be £300 per annum payable quarterly.

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board and apartments in the Hospital.

BRECON INFIRMARY, South Wales.—Resident House Surgeon, unmarried. Salary £90 per annum, with furnished apartments, board, all found except beer, attendance, fire, and gas.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £120, without residence.

BURTON-ON-TRENT INFIRMARY.—House Surgeon. Salary £150 for the first year and £170 for the second year, with furnished rooms in the Infirmary, and coals and gas free.

CARDIFF INFIRMARY.—Assistant House Surgeon and Assistant House Physician, each for six months. Salaries at the rate of £50 per annum, with board, washing, and apartments.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant. Tenable for three months on payment of eight guineas.

CITY ASYLUM, Nottingham.—Second Assistant Medical Officer, unmarried. Salary £150, with board, apartments, and washing.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY, Dumfries.—Assistant House Surgeon. Board and washing provided.

DUNDEE ROYAL INFIRMARY.—Fourth Resident Medical Assistant for six months. Salary at the rate of £40 per annum, with board and washing.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, London.—Surgeon to Out-patients.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for twelve months. Salary £50, with board, lodging, and washing in the hospital.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—House Surgeoncy. Salary £100 per annum, with board, residence, and washing.

GLASGOW LUNACY DISTRICT BOARD.—Medical Officer (Assistant) for Woodilee Asylum, to act as Pathologist. Salary £100 per annum, with board, apartments, &c.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, London.—Assistant Anæsthetist for six months. Honorarium at the rate of 10 guineas per annum.

HANTS COUNTY ASYLUM, Fareham.—Third Assistant Medical Officer, unmarried. Salary £125 per annum, increasing to £150 after twelve months' service, with furnished apartments, board, washing, and attendance.

HASTINGS, ST. LEONARD'S, AND EAST SUSSEX HOSPITAL.—House Surgeon, unmarried. Salary £75 per annum, with residence, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormonde-street, London.—Two House Surgeons to Out-patients, for six months. Salary 25 guineas each.

HULME DISPENSARY, Dale-street, Stretford-road, Manchester.—House Surgeon. Salary £130 per annum, with apartments, attendance, coal, and gas.

INFIRMARY OF THE WANDSWORTH AND CLAPHAM UNION, St. John's-hill, Clapham-junction, S.W.—Third Assistant Medical Officer for twelve months. Salary £70 per annum, with board, lodging, and washing.

KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £50 a year, with board and lodging.

KENT COUNTY OPHTHALMIC HOSPITAL, Maidstone.—House Surgeon. Salary £100 per annum, with board and lodging in the Hospital.

KING'S COLLEGE, London.—The Sambrook Medical and Surgical Registrarships (open to King's College students only).

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

LONDON COUNTY ASYLUM, Hanwell.—Junior Assistant Medical Officer. Salary £150 per annum, with board, furnished apartments, and washing.

MERCER'S HOSPITAL, Dublin.—Vacancy on the Surgical Staff.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant Physician and Pathologist, Surgeon for Diseases of Women, and an Assistant Surgeon.

MIDDLESEX HOSPITAL, W.—Assistant Physician.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road.—Junior Resident Medical Officer for six months. Salary at the rate of £40 per annum, with board, attendance, and washing.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Salary £140 per annum, all found except board, unmarried.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—House Surgeon, unmarried. Salary £65 per annum, rising to £75, with board, residence, &c.

ROYAL SEA BATHING HOSPITAL, Margate.—Resident Surgeon. Salary £100, with board and residence. Apply to the Secretary, Royal Sea Bathing Hospital Offices, 30, Charing-cross, London.

SALFORD ROYAL HOSPITAL.—House Surgeon for twelve months. Salary £100 per annum, with board and residence.

ST. THOMAS'S HOSPITAL.—Vacancy for a Physician.

SEAMEN'S HOSPITAL SOCIETY (*Dreadnought*), Greenwich.—Senior House Surgeon. Salary £75 per annum, with board and residence, and an additional £25 per annum conditionally. Also House Surgeon. Salary £50 per annum, with board and residence. These vacancies are for Officers at the Branch Hospital in the Royal Victoria and Albert Docks.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Salary £2 per mensem, with residence, board, and washing.

SURREY DISPENSARY, Southwark, S.E.—Physician. Honorarium 50 guineas per annum.

TOTTENHAM HOSPITAL.—Honorary Physician to In-patients.

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Resident Medical Officer. Salary £100 per annum. Apply to Dr. Parry, R.M.O.

WESTERN DISPENSARY, Rochester-row, Westminster.—Resident Medical Officer, unmarried. Salary 100 guineas per annum, with furnished rooms, coals, gas, and attendance.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—House Surgeon, unmarried.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon.—Salary £50 per annum, with board, &c.

WEST KENT GENERAL HOSPITAL, Maidstone.—Assistant House Surgeon for six months. Honorarium at the rate of £50 per annum, with board and residence.

WESTERN OPHTHALMIC HOSPITAL, 153, Marylebone-road, London.—Assistant Surgeon.

WORKSOP DISPENSARY HOSPITAL.—Resident Surgeon, unmarried. Salary £120 per annum, paid monthly, with increase when hospital is opened. Rooms, coal, gas, furniture, and housekeeper provided. Apply to Mr. Charles A. Whall, Worksop.

Births, Marriages, and Deaths.

BIRTHS.

DAMAN.—On Feb. 6th, at Oakhurst, Dorridge, Knowle, Warwickshire, the wife of Karl A. Daman, L.D.S., of a daughter.

KIRKBY.—On Feb. 5th, at Maesteg, Glamorganshire, the wife of Walter Kirkby, L.R.C.P. Edin., L.R.C.S. Edin., of a daughter.

ROSS.—On Jan. 29th, at Burslem, Staffordshire, the wife of William Levington Ross, L.R.C.S. & L.R.C.P.I., of a son.

WINGFIELD.—On Feb. 3rd, at Winchester, the wife of Hugh E. Wingfield, M.D., of a daughter.

YOUNG.—On Jan. 26th, at Hunmanby, Yorks, the wife of Charles A. Young, B.A. Cantab., M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

EAST—TRIGGS.—On Feb. 3rd, at Holy Trinity, Bishops-road, Paddington, by the Rev. Edwin Allwright, M.A., William Norwood East, M.B. Lond., M.R.C.S., L.R.C.P., of Portland, Dorset, son of W. Quartermaine East, to Linnie, only daughter of Mrs. Triggs, of 135, Westbourne-terrace, W.

STABB—HUNTLEY.—On Feb. 5th, at the Church of SS. Philip and James, Cheltenham, William Wilking Stabb, M.D., of Torquay, to Mary Gertrude, only daughter of the Rev. Osmond C. Huntley, of Boxwell, Gloucestershire.

WARDEN—M'KENDRICK.—In the Bute Hall, University of Glasgow, on Saturday, Feb. 3rd, by the Very Rev. Principal Story, D.D., and the Rev. Joseph Vickery, Castle-street Congregational Church, Dundee (uncle of the bride), Archd. A. Warden, M.A., M.D., Paris, to Rachel Mary, elder daughter of John Gray M'Kendrick, Professor of Physiology in the University of Glasgow. At home after 20th curt., 60, Avenue d'Jena, Paris.

DEATHS.

ADAMS.—On Feb. 3rd, at Loudoun-road, N.W., William Adams, F.R.C.S., aged 80 years.

GRAINGER STEWART.—On Feb. 3rd, at Charlotte-square, Edinburgh, Sir Thomas Grainger Stewart, M.D., LL.D., Physician in Ordinary to Her Majesty the Queen in Scotland, and Professor of The Practice of Physic in the University of Edinburgh.

MAXWELL.—On Dec. 30th, 1899, at Wahroonga, Sydney, New South Wales, Charles Mayne Maxwell, M.B., M.R.C.S., lately of Lasswade, Midlothian.

MYDDELTON-GAVEY.—On Feb. 4th, at 16, Broadwater Down, Tunbridge Wells, after influenza, Frances Caroline, the dearly loved wife of E. H. Myddelton-Gavey, M.R.C.S. Eng., and daughter of the late Charles Catt of Summerhill, Lindfield, aged 41 years.

OAKELEY.—On Feb. 4th, at Lydart, Pepys-road, New Cross, S.E., Charles Edward Oakeley, L.R.C.P., L.R.C.S. Edin., & L.M., L.F.P.S. Glasg.

TURNER.—On Feb. 2nd, at St. Leonard's, Frank Charlewood Turner, M.D., F.R.C.P., Physician London Hospital, of Warren Wood, Wrotham, Kent.

WELLBORNE.—On Feb. 2nd, at Brixton, Richard Wellborne, M.D., in his eighty-fifth year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Birth, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE MEDICAL PROFESSION IN ENGLAND FROM A FRENCH POINT OF VIEW.

WE have received a French paper—by name *La Parfait Nourricier*—for February, 1900, containing an article entitled, "Les Médecins Anglais: Comment ils exercent leur Profession," by Dr. Edouard Montholon. The article is amusing and as being the view of a foreigner we think a note of some of its more salient passages will interest our readers. Dr. Montholon commences by pointing out that in every other country but England the word "shop" and "doctor" (*médecin*) are in direct opposition and are only combined when it is wished to insult the profession. It is otherwise in England, where the doctor compares with an ordinary tradesman, whom he further resembles by selling medicines. Dr. Montholon gives an amusing description of a "sixpenny" practice, but we think he is a little too generous in his estimate that such a practitioner may be found in one street out of five. He visited many and says, "The consultation took from three to five minutes, rarely more, and the form of question was always the same. 'Where do you feel bad? What do you complain of? How long have you been ill? Do you drink?' The answers given, the assistant scribbles a prescription, chooses a medicine already made up from some within reach of his hand, and gives over the lot to the patient, mentioning his fee. Next, please. Including the medicine the consultation costs one or two shillings and very rarely more than three francs except in the case of a dressing or of an operation." We cannot make out whether this paper is only one of a series of articles or whether it is meant to be a picture of the universal state of medical practice in England, but we should fancy that the former was the case. The picture of the state of opinion among a certain class of patient is not overdrawn when he says: "Public confidence is given to a medical man who has lots to do rather than to a man of science and talent, to the chief practitioners at the large hospitals, or to the learned and literary members of the profession. In London men such as Pasteur, Charcot, Velpeau, and Péan are considered as amateurs and not as serious practitioners. Sir Joseph Lister and Sir James Paget are much less sought than a *rebouteux de faubourg* who sees 200 patients a week in his shop." Then comes the following amazing piece of information. "At the most a cobbler would allow himself to be treated by Sir William Jenner, baronet and physician to the Queen, because at the beginning of his career he was employed for 10 years in a druggist's shop in Albany-street and five years in a 'doctor's shop' at Hampstead." It is well known that when a very young man the late Sir William Jenner had his own way to make. We hardly fancy, however, that this was how he gained the confidence of the cobbler class. It must not be supposed that Dr. Montholon writes in a condemnatory spirit. On the contrary, he bewails the restrictive measures which prevail in France. There, of course, no medical man is allowed to sell medicines and therefore, according to Dr. Montholon, half the practitioners are perishing from hunger.

THE SLAUGHTER-HOUSES IN ALDGATE HIGH-STREET.

MANY medical men, especially those whose student days were passed at St. Bartholomew's or the London Hospital, will recollect a picturesque, if somewhat odoriferous, row of some 15 butchers shops in Aldgate High-street. Behind them were slaughter-houses, the operations in which were very fairly visible from the street and which, though necessary, were neither edifying nor pleasant. In front of the shops the gutters often ran with blood and altogether the establishments were thoroughly out of place in a large city. We learn from the *City Press* that a motion for their abolition is to be brought forward at a near meeting of the Common Council. An ardent archæologist might hope that the buildings will be left, for they are interesting specimens of architecture and there is none too much of Old London left, but for the abolition of the trade therein carried on we have nothing but praise.

"THE MACKEY FUND."

To the Editors of THE LANCET.

SIRS,—On behalf of the "Mackey Fund" I beg to acknowledge the following subscriptions:—Amount previously acknowledged, £15 10s.; Sir Thomas Smith, £5 5s.; Mr. O. E. B. Limrick, £1 1s.; Mr. J. B. Brady, 2s. 6d.; A Friend, £10; An Old Friend, £5; Dr. J. Hawtrey Benson, £1 1s. I am, Sirs, yours faithfully,

LEONARD DOBSON, M.D. Lond.

59, Addison-gardens, Kensington, Feb. 7th, 1900.

"A DISCREDITABLE CIRCULAR."

ON several occasions in October and November last we commented on medical advertising by a firm of chemists carrying on business at 19, North Earl-street, Dublin, and on Nov. 4th (page 1273) we inserted a letter stating that the same address was given in the Medical Register and Medical Directory as that of a Mr. J. C. McWalter, L.R.C.S.I., and L.A.H. Our correspondent made the remark that perhaps Mr. McWalter could offer some explanation, and it is stated that the Royal College of Surgeons in Ireland has decided to give him an opportunity.

"IMPROPER ADVERTISEMENT."

To the Editors of THE LANCET.

SIRS,—Referring to the letter published by you in your issue of the 23rd of December, 1899 (page 1790), in which a correspondent made a charge of improper advertisement against me, and referring to the letter from me to you, published by you in your issue of the 30th of December, 1899 (page 1870), informing you that the statements contained in the said letter signed "Ethics" were absolutely untrue, I was advised to commence an action for libel against you in respect of the false statements which you were led through your correspondent to make against me. In view, however, of the fact that you have in your issue of the 3rd inst. (page 355) unreservedly withdrawn all the imputations made upon me in the said letter of your correspondent and apologised for making the same and have done everything in your power to make reparation to me for the injury you have done me I am prepared to accept the apology which you have made and so end the matter. I may add that my only object in prosecuting the action was to absolutely clear myself from any imputation made against me, and this having been done I am satisfied.

I am, Sirs, yours faithfully,

, Harley-street, 7th Feb., 1900. KARL FÜRTH.

PROFESSIONAL UNION.

WE have always maintained that for redressing the grievances and improving the position of the medical profession no course of action affords such hopeful prospects of success as the cultivation of a fraternal spirit. Wherever disunion prevails there will be no lack of patients and others ready to take advantage of the conditions imposed by the overcrowded state of the profession and to obtain the services of medical practitioners on terms incommensurate with the outlay of money and time which has been incurred in their education and acceptable only to the necessitous. No further illustration of this is required than the fact that associations exist by means of which large populations, not necessarily of the poorest, can obtain medical attendance for a payment of 2d. per week or less. For this reason we were glad to be able to make the announcement of the formation of the Birmingham and District General Medical Practitioners' Union (THE LANCET, Dec. 30th, 1899, p. 1866), a list of the officers of which will be found in THE LANCET of Jan. 27th, p. 278. A statement issued by the three joint honorary secretaries explains that the union has been formed during the last few months and has been constituted on thoroughly democratic lines, giving every practitioner an opportunity of bringing forward his individual opinions in a constitutional manner and securing united action of the local profession through direct representatives. The area included in this organisation is that which is known as "Greater Birmingham," extending on all sides to some five miles from the centre of the city, and has been divided into 14 medical wards. The members in each ward are invited to elect representatives who form a central council for conducting the actual business of the union. Already nearly 200 members have been enrolled, including men in every grade of general practice, and the moving spirits of the organisation expect that when it is completed it will gain the support of all practitioners who have at heart the welfare of their profession. The union is not intended to compete with existing medical societies or associations and will be limited entirely to medico-political and medico-ethical matters. Its objects are defined to be (*a*) to provide an effective organisation for the purpose of dealing with all matters affecting the interests of general practitioners; (*b*) to promote union and good-fellowship amongst neighbouring practitioners; (*c*) to endeavour to establish, as far as possible, an improved scale of fees; (*d*) to discourage advertising of every kind and other unfair and unprofessional competition; (*e*) to promote more satisfactory relations between the different branches of the profession; (*f*) to consider and take action upon all legislative proposals calculated to affect the interests of general practitioners; (*g*) to endeavour to obtain increased representation for general practitioners on the General Medical Council and other public bodies; (*h*) to endeavour to remedy, as far as possible, the abuses of hospitals and dispensaries; (*i*) to establish a medical club house, with such accommodation as may be considered desirable for the purposes of the union; (*j*) to provide facilities for the collection of members' accounts; and (*k*) to oppose any attempt on the part of public bodies to exploit the services of any member of the profession to the detriment of the others. The scope of this laudable programme is obviously a very large one and will require considerable business capacity on the part of those who may be charged with carrying it into execution, but where is that talent to be found if not in Birmingham? Above all things it must be remembered that comparatively little can be accomplished without unanimity, and for this reason it is to be hoped that the new association may receive hearty support from those whose interests it seeks to protect. Medical practice has its business side as well as its scientific and its philanthropic side, and it is the duty of each member of the profession to do what in him lies to maintain its rights and privileges intact.

Yeoman.—We have not seen the "puff" in question. It should be remembered that in these cases the medical man generally suffers from the indiscretion of his friends.

Easy.—Probably the candidate would be accepted.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 8th, 1900.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
Feb.	2	29·66	E.	...	45	40	34	33	35	Overcast
,,	3	29·73	N.E.	0·75	37	37	34	35	36	Overcast
,,	4	29·73	W.	...	41	38	35	35	36	Overcast
,,	5	29·60	E.	...	43	39	35	36	37	Overcast
,,	6	29·70	N.E.	...	71	42	35	34	36	Overcast
,,	7	29·89	N.	...	59	37	28	Fzn.	29	Fine
,,	8	29·94	N.E.	...	43	33	25	Fzn.	26	Hazy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.).

WEDNESDAY (14th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (15th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.) University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.).

FRIDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.).

SATURDAY (17th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (12th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Meeting. Mr. F. C. Wallis: Resection of Small Intestines in a Child.—Mr. F. Jaffery: Urticaria Pigmentosa (?).—Sir Hugh H. Beevor, Bart.: Pulsus Bisferiens.—Mr. A. J. Barker: Congenital Dislocation of the Hip (with skiagrams).—Dr. W. Ewart: Emphysema treated by continuous Elastic Pressure.—Mr. W. H. Battle: Tumour of Femur.—Dr. W. J. Hadley: Two Rare and Interesting Cases of Rheumatism.—Mr. McAdam Eccles: (1) Interstitial Inguinal Hernia; (2) Cruro-scrotal Inguinal Hernia.—Dr. C. W. Chapman: Cyanosis from Birth, absence of Cardiac Murmur.—Dr. S. Mullick: Displacement of the Heart to the Right Side. Dr. E. Cautley: The Heart of a Case of Aortic Stenosis exhibited at the previous Clinical Meeting.—Mr. J. L. Thomas: A New Tourniquet. Patients will be in attendance at 8 P.M.

TUESDAY (13th).—CHILDHOOD SOCIETY (Library of the Sanitary Institute, 72, Margaret-street, W.).—8 P.M. Dr. W. Garnett: Early Stages of Technical Education.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Adjourned Discussion on the following Papers:—On the Conduct of the Mastoid Operation for the Cure of Chronic Purulent Otorrhœa, with special reference to the immediate Healing of the Cavity in the Bone left by the operation by means of Epithelial Grafts, by C. A. Ballance (with lantern demonstration); with remarks on the Selection of Cases for the Operation, by Sir William Dalby.—The Complete Mastoid Operation for the Cure of Chronic Suppurative Disease of the Middle Ear; observations on the Selection of Cases for Operation, by Mr. A. E. Cumberbatch.

WEDNESDAY (14th).—HUNTERIAN SOCIETY (Theatre of the London Institute, Finsbury-circus).—8.30 P.M. Dr. F. J. Smith: The Influence of Modern Medicine on Surgery (Annual Oration).

THURSDAY (15th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road).—8.30 P.M.: Papers:—Dr. G. F. Blacker: Experiences in Feeding Delicate and Premature Children with Modified Milk.—Mr. F. Jaffrey: Calculous Suppression of Urine treated by Operation.

FRIDAY (16th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Paper: Dr. E. W. Hope: Insanitary Property and Workmen's Dwellings in Liverpool.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (12th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. E. T. Collins: The Anatomy and Pathology of the Eye. (Erasmus Wilson Lecture.)

LONDON THROAT HOSPITAL (204, Gt. Portland-street, W.).—4.30 P.M. Dr. Cathcart: Impaired Movements of Vocal Cords. (Post-Graduate Course.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr. M. Morris: Consultation. (Skin.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Beddard: Transfusion and Venesection.

TUESDAY (13th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. T. Williams: Consultation. (Medical.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, W.C.).—3.30. P.M. Dr. Buzzard: Hysteria.

ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Prof. E. Ray Lankester: The Structure and Classification of Fishes.

WEDNESDAY (14th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. E. T. Collins: The Anatomy and Pathology of the Eye. (Erasmus Wilson Lecture.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—4.30 P.M. Dr. Eddowes: Urticaria. (Post-graduate Course.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. F. Payne: Consultation. (Medical.)

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Wethered: The Prognosis of Pulmonary Tuberculosis.

THE SANITARY INSTITUTE, (Parkes Museum, Margaret-street, W.).—8 P.M. Discussion on Insanitary Condition of the London Streets (opened by Mr. W. N. Blair).

THURSDAY (15th).—WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street, W.).—5 P.M. Clinical Demonstration:—Dr. H. Campbell: Cases of Facial and other Cranial Nerve Paralyses.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Lees: Demonstration of Selected Cases.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Galloway: Dermotological Demonstration. (Post-graduate Course.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—3 P.M. Roentgen Ray Class:—Dr. H. Low: Demonstration V. 4 P.M. Mr. J. Hutchinson: Consultation. (Surgical.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Beddard: Nature and Treatment of Shock and Collapse.

FRIDAY (16th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. E. T. Collins: The Anatomy and Pathology of the Eye. (Erasmus Wilson Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. D. Grant: Consultation. (Eye, Ear, Nose and Throat.)

During the week marked copies of the following newspapers have been received: *Norfolk Weekly Standard, Rangoon Times, Madras Times, Birmingham Daily Gazette, Liverpool Daily Post, Health, Weekly Budget, Christian World, Sanitary Record, Sheffield Independent, Western Mail, Bradford Observer, Glasgow Herald, Times of India, Pioneer Mail, Citizen, Builder, Scotsman, Architect, Leeds Mercury, Hertfordshire Mercury, Yorkshire Post, Reading Mercury, Brighton Gazette, City Press, Cambrian, Bristol Mercury, Local Government Chronicle, Mining Journal, Cork Constitution, Surrey Advertiser, Local Government Journal, National Review, Manchester Guardian, Leicester Daily Post, Chorley Standard, Irish Society, Daily Telegraph, Huddersfield Examiner, Carmarthen Reporter, Bakers' Times, Hull Daily News, Eastern Morning News, League Journal, Le Parfait Nourricier (Paris), Evesham Journal, Preston Herald, Umpire, Derby Advertiser, Eastern Post (London), Linlithgowshire Gazette, Public Health, Waterford Chronicle, Munster Express, Malton Gazette, Warwick Advertiser, Dunoon Herald, &c., &c.*

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE, OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1899, which was completed with the issue of Dec. 30th, and the Title-page to the Volume were given in THE LANCET of Jan. 6th.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1899 are now ready. Bound in cloth, gilt lettered, price 13*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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Subscriptions (which may commence at any time) are payable in advance.

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The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied, Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

Communications, Letters, &c., have been received from—

A.—Dr. H. E. Annett, Liverpool; Messrs. Armour and Co., Lond.; Accrington Corporation, Medical Officer of Health of; Aston Hall, Sutton Coldfield, Secretary of; Mr. W. R. Alexander, Lond.; Mr. W. H. Austin, Lond.; Alpha, Lond; Advertiser, Marsfield; Mr. W. E. Alderson, Newcastle-on-Tyne; Mr. John Allan, Lond.

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